EPA United States Environmental Protection Agency

Fiscal Year 2009 National Environmental Information Exchange Network Grant Program

Solicitation Notice

U.S. Environmental Protection Agency
Office of Environmental Information
Office of Information Collection
Information Exchange and Services Division
Information Exchange Partnership Branch

September 2008

OFFICE OF ENVIRONMENTAL INFORMATION

Fiscal Year 2009 National Environmental Information Exchange Network Grant Program Solicitation Notice

Table of Contents

Appendix

FY 2009 National Environmental Information Exchange Network Grant Program Solicitation Notice

Overview Information

Agency Name and Office: U.S. Environmental Protection Agency (EPA), Office of Environmental Information (OEI)

Funding Opportunity Title: FY 2009 National Environmental Information Exchange Network Grant Program

Announcement Type: Initial Announcement, Availability of Funding Solicitation Notice

Funding Opportunity Number: EPA-OEI-09-01

Catalog of Federal Domestic Assistance (CFDA) Number: 66.608

Dates: November 21, 2008 – Deadline for submitting applications to EPA
August 2009 – Expected Issuance of FY 2009 Exchange Network Grant Program awards

Executive Summary: EPA, states, territories, and tribes continue to invest collaboratively to expand the National Environmental Information Exchange Network (Exchange Network or EN). The Exchange Network is an Internet- and standards-based, secure information network that facilitates the electronic sharing, integration, analysis, reporting, and use of environmental data from many different sources. The Exchange Network makes it easier to obtain the timely, accurate information vital to environmental and human health decision-making.

The Exchange Network Grant Program provides funding to states, territories, tribes, and inter-tribal consortia to develop the information technology and information management (IT/IM) capabilities needed to actively participate in the Exchange Network. This program also supports the exchange of data; mentoring, planning and training activities; and collaborative work within the Exchange Network. This grant program may also be used to fund the standardization, exchange and integration of geospatial information to address environmental, natural resource, and human-health challenges.

Activities eligible for funding under the FY 2009 Exchange Network Grant Program may include one or more of the following:

- **Infrastructure** – supports the development of new nodes or upgrades to Node 2.0 (Nodes, Clients, and Data flows) to participate in the Exchange Network;
- **Data Exchange and Integration** – supports the development of the capability to exchange data through the Exchange Network;

- **Mentoring, Planning and Training** – supports Exchange Network activities such as mentoring other partners; planning activities; and developing training materials and conducting training on specific topics; and
- **Collaboration** – supports collaborative, multi-partner projects that demonstrate the value of the Exchange Network.

Grant proposals should focus on these activities in relation to how they support Exchange Network priorities**. In FY 2009, the highest priority activity is completion of regulatory and national system flows for data exchanges that will be established by the end of FY 2011**. Other Exchange Network priorities include:

- establishment of new 2.0 Nodes
- upgrade of existing Version 1.1 Nodes and dataflows to the Node 2.0 specification
- Network publishing
- non-regulatory data flows
- Network-wide innovative projects. Innovative projects include, but are not limited to
  - climate change/greenhouse gas emissions
  - electronic documents (eDoc)
  - open dump data exchanges
  - underground storage tanks data standards and data schemas
  - emergency response
  - water quality laboratory data reporting

Please note that these other priorities are not listed in order of importance – they are of equal importance to the Exchange Network.

This year represents the final year for funding of Node 2.0 upgrades. Additionally, applicants that received previous year funding for Node 2.0 upgrades will not be considered again for Node 2.0 upgrade funding in fiscal year 2009. For updated information on the development of Node 2.0, please visit: http://www.exchangenetwork.net/node/. We encourage applicants to sign up for Network email alerts to receive notices of current developments and successes.

Innovative projects must demonstrate a clear focus on the development of reusable services for the Exchange Network. For examples of completed and developing innovative projects, refer to the Exchange Network Web site at http://www.exchangenetwork.net/exchanges/. Appendix B offers more detailed information on data flows and innovative projects.

EPA continues its phased approach for grant application submission, evaluation, and award processes while offering two methods which applicants may use to apply for National Environmental Information Exchange Network grants: 1) hardcopy, mailed or delivered applications, or 2) electronic applications through the federal grants.gov web site. Initially, a streamlined application will be accepted which provides needed information to allow for the evaluation of the project, including work areas to be accomplished, priority activities supported, funding needs, and results expected from the funded proposal. Please see Section IV and Appendix D for more information.

EPA expects to notify the applicants of its selection decisions after they are made in March 2009. At that time, notified applicants will be required to submit additional or updated documents required to process awards. OEI anticipates that all grants will be awarded by August 2009.

Applicants are responsible for reading and complying with information found in this solicitation notice. The following sections and appendices are likely to be of particular interest to applicants:

- Section I-3 describes the types of activities on which proposals should focus; Appendix B provides greater detail for some of these activities; Appendix C describes activities related to planning, mentoring, and training;
- Section II provides important award information including the maximum award amount, types of assistance agreements (grants vs. cooperative agreements), funding mechanisms (direct funding vs. in-kind services), and incorporation of Exchange Network grants into performance partnership grants and consolidated grants;
- Section III presents the eligibility criteria and related information;
- Section IV provides the application instructions and Appendix D contains more detailed information. Appendix E provides guidance for preparing Quality Assurance Project Plans (QAPP) which will be required of applicants if funding is awarded;
- Section V presents proposal evaluation criteria, EPA's evaluation process, and projected dates for announcing selections and awards;
- Sections VI through VIII provide other administrative and required grants management information, such as billing and electronic reporting requirements; Appendix F provides the form that grantees are to use for semi-annual reports; and
- Appendix A provides the definitions of terms used in this Notice.

Full Text of Announcement

FY 2009 National Environmental Information Exchange Network Grant Program Solicitation Notice

I. Funding Opportunity Description

I-1. Introduction

The U.S. Environmental Protection Agency (EPA) and its state, tribal, and territorial partners continue to invest collaboratively to expand the National Environmental Information Exchange Network (Exchange Network or EN). The original impetus for developing the Exchange Network arose from discussions between EPA and state environmental agencies about the challenges of collecting, sharing, and using environmental information to improve human health and environmental protection decision-making. In 1998, EPA and the states formed the State/EPA Information Management Work Group (IMWG). The IMWG developed the conceptual design for a national, secure network to improve environmental decision-making through the comprehensive exchange of environmental information. In 2004, the IMWG commissioned the Network Planning Action Team (NPAT) to develop a Business Plan for the Network. The *Exchange Network Business Plan* strategies and vision continue to guide Exchange Network implementation and growth.

In 2007, the Exchange Network Leadership Council (ENLC) issued the Exchange Network Strategic Plan which described its commitment to "building a state-of-the-art Environmental Information Exchange Network which will become the preferred method for exchanging environmental data in support of better environmental decision-making." The objectives within the EN Strategic Plan focuses efforts to complete needed infrastructure, expand use of the Network to support environmental decision-making, and meet customer needs from the Network. In developing proposals for the Exchange Network Grant Program, applicants may access the EN Strategic Plan at http://www.exchangenetwork.net/ENStrategicPlan.pdf.

The Exchange Network Grant Program provides funding to states, territories, tribes, and inter-tribal consortia to develop the information technology and information management (IT/IM) capabilities needed to actively participate in the Exchange Network. This program also supports the exchange of data; mentoring, planning and training activities; and collaborative work within the Exchange Network. This grant program may also be used to fund the standardization, exchange, and integration of geospatial information to address local, regional, and national environmental, natural resource, and human-health challenges.

EPA anticipates that the statutory authority for the Fiscal Year 2009 Exchange Network Grant program will be provided under the State and Tribal Assistance Grant (STAG) heading within EPA's Fiscal Year 2009 appropriation act. The FY 2009 President's Budget requests $11,000,000 for the National Environmental Information Exchange Network Grant Program.

This Solicitation Notice is subject to the availability of funds for this program in the FY 2009 annual appropriation for EPA.

Environmental Results: The Agency's mission is to protect human health and the environment. Designed to help states, territories, tribes, and EPA share information more efficiently and effectively over the Internet, the Exchange Network provides real-time access to high-quality, geographically focused environmental information to improve environmental decisions at all levels of government. To this end, the grant program supports the Cross-Goal Strategy of Innovation and Collaboration, Objective of "Collaborating on Common Goals" within the ***2006 – 2011 EPA Strategic Plan***. As an example, a water quality dataflow is allowing ten states and three tribes to report physical, chemical, biological, and habitat data efficiently and effectively to EPA through a growing network. Previous grants have also funded efforts to:

- develop an XML schema for exchanging regional water quality data, providing decision makers and the public with timely, accurate, and consistent information on watersheds throughout the region;
- expand a system by which local water monitors and water quality laboratories use common sampling and monitoring results to make recommendations to state environmental decision makers on whether to order beach closures to the public; and
- support electronic submission of state drinking water data directly from laboratories to state drinking water programs and EPA through a five-state collaborative effort which used the Exchange Network as its foundation.

It is EPA policy to link proposed assistance agreements to the Agency's Strategic Plan and Government Performance and Results Act architecture. This policy ensures that environmental outputs and outcomes are appropriately addressed in assistance agreements, work plans and performance/technical reports (please see Appendix A for definitions of the terms "outcome" and "output"). The overall outcome expected from the FY 2009 Exchange Network assistance agreements is more informed environmental decision-making enabled by improved access to, and exchange of, high-quality environmental data from local, federal, and private sector sources. To achieve this outcome, the grant program supports a number of intermediate outcomes, which should form the basis for all assistance proposals, including the following:

- increased speed and timeliness of data exchange by allowing data exchanges to happen more frequently, thereby decreasing delays between entry into partner systems and availability to the entire Network community;
- increased efficiency of data exchange by reducing administrative burden, including reducing or eliminating manual intervention for scheduling, resubmissions, or security;
- improved quality of data through additional and more efficient and earlier detection of errors and discrepancies, as well as electronic collection;
- improved standardization and comparability through common data standards and formats to provide additional definition, structure, and integration opportunities;
- expanded functionality at reduced costs through shared infrastructure and shared tools;
- increased data volume shared among partners by encouraging more data exchanges over the Network and among more partners;

- increased data use and integration across institutional boundaries by leveraging a common strategy for environmental Web Services; and
- improved business processes that facilitate burden reduction on the regulated community.

The Exchange Network Grant Program supports four areas of assistance activities which form the foundation for successful proposals. The activities are:

- Infrastructure;
- Data Exchange and Integration;
- Mentoring, Planning and Training; and
- Collaboration.

An applicant's work plan must detail measurable output(s) for each of the activities included within the proposal. Examples of Infrastructure activities include the development of an Exchange Network Node, dataflow upgrade, or the implementation of IT hardware and software needed to participate in the Exchange Network. Data Exchange and Integration activities include implementation of an Exchange Network data exchange activity or demonstration of the use of network publishing or environmental data by Exchange Network partners. An output from Mentoring, Planning and Training activities could be the development of an Exchange Network training course for states, tribes or territories who are becoming actively engaged in the partnership. The number of times the training is given would be another output. Collaboration activities outputs could include any of these examples, implemented in a shared partnership between multiple Exchange Network partners.

I-2. Program History

Authorization for the Exchange Network Grant Program over the past seven years has been provided by the annual appropriations for EPA: FY 2002 (Public Law 107-73), FY 2003 (Public Law 108-7), FY 2004 (Public Law 108-199) FY 2005 (Public Law 108-447) and FY 2006 (Public Law 109-54), FY 2007 (Public Law 110-5). FY 2008 (Public Law 110-161). From FY 2002 to FY 2008, EPA has provided approximately $133M for state, tribal, and territorial awards and associated program support awards through the Exchange Network Grant Program. FY 2009 will be the eighth year of the Exchange Network Grant Program.

In a relatively short period of time, the Exchange Network has become a reality. As of June 2008, all 50 states, 52 tribes and five territories have participated in developing the Exchange Network at some level. Fifty states and eight tribes, and one territory have established their Exchange Network Node and have exchanged data with another partner. For additional information on state, territorial, and tribal activities, please see the grant activities that are described at http://www.epa.gov/exchangenetwork/grants/index.html. For information on the progress of the data exchanges, please see http://www.exchangenetwork.net.

I-3. Assistance Activities

This Solicitation Notice requests that states, territories, tribes, and inter-tribal consortia to develop and submit proposals to support activities facilitating the business needs of multiple, if not all, Exchange Network partners while being focused on the stated priorities of the Exchange Network. Applicant's proposals should address activities from any or all of the assistance activities listed below. At the same time, the evaluation criteria are sufficiently flexible to allow applicants to design innovative assistance activities appropriate to their needs and those of other Network users. Applicants may request funding to carry out projects consisting of assistance activities other than those that EPA has listed as examples, provided they are consistent with the goals of the Exchange Network program. EPA encourages applicants who have questions regarding project eligibility to use the procedure in Section IV-5 to obtain clarification from EPA. Applicants are further encouraged to attend Exchange Network Users meetings as a way of sharing accomplishments and obtaining useful information on Exchange Network projects and technology.

Activities eligible for funding and that may be addressed in proposals under the FY 2009 Exchange Network Grant Program include, but are not limited to, the following:

- **Infrastructure** – supports the development of new nodes or upgrades to Node 2.0 (Nodes, Clients, and Data flows) to participate in the Exchange Network;
- **Data Exchange and Integration** – supports the development of the capability to exchange data through the Exchange Network;
- **Mentoring, Planning and Training** – supports Exchange Network activities such as mentoring other partners; planning activities; and developing training materials and conducting training on specific topics; and
- **Collaboration** – supports collaborative, multi-partner projects that demonstrate the value of the Exchange Network.

Grant proposals should focus on activities that support Exchange Network priorities**. In FY 2009, the highest priority is completion of regulatory and national system flows for data exchanges that will be established by the end of FY 2011**. Other Exchange Network priorities include:

- establishment of new 2.0 Nodes
- upgrade of existing Version 1.1 Nodes and dataflows to the Node 2.0 specification
- Network publishing
- non-regulatory data flows
- Network-wide innovative projects. Innovative projects include, but are not limited to
  - climate change/greenhouse gas emissions
  - electronic documents (eDoc)
  - open dump data exchanges
  - underground storage tanks data standards and data schemas
  - emergency response
  - water quality laboratory data reporting

Please note that these other priorities are not listed in order of importance – they are of equal importance to the Exchange Network.

This year represents the final year for funding of Node 2.0 upgrades. Additionally, applicants that received previous year funding for Node 2.0 upgrades will not be considered again for Node

2.0 upgrade funding in fiscal year 2009. For updated information on the development of Node 2.0, please visit: http://www.exchangenetwork.net/node/. We encourage applicants to sign up for Network email alerts to receive notices of current developments and successes.

In 2006, the Exchange Network Leadership Council (ENLC) convened a strategy team to look at issues related to exchanging geospatial data over the Network. The Team prepared a white paper (http://www.exchangenetwork.net/exchanges/cross/GeospatialStrategyReport_FINAL.pdf) detailing plans to promote the use of Geospatial Mark-up Language (GML) for the exchange of geographic features (points, lines, polygons) over the Exchange Network. Further, the team endorsed the exploration of Geospatial "Really Simple Stuff" (GeoRSS) GML to address most of the exchange of geospatial features over the Exchange Network. Applicants may wish to strengthen their application for Network grants funding by linking proposed data standards and exchange efforts to geospatial data improvements underway nationally.

Innovative projects must be demonstrably focused on the development of reusable services for the Exchange Network. Please refer to http://www.exchangenetwork.net/exchanges/ for examples of completed and developing innovative projects. Appendix B offers more detailed information on data flows and innovative projects.

Assistance Activities are further described, in more detail, in the following paragraphs. Applicants should also refer to the Evaluation Criteria in Section V-1 and to Appendices A – D when developing their proposal. Appendix A provides relevant definitions of terms. Appendix B describes the status and plans for EPA Program Office activities related to environmental information systems and suggested data exchange activities for Network partners to consider. This information should be used by applicants to align their proposals with the Program Office milestones. Appendix C provides more information on activities that could be included in the areas of mentoring, planning and training. Appendix D provides detailed grant application instructions.

For those applicants that receive funding, Appendix E contains guidance on preparing the tailored Quality Assurance Project Plan and is designed to help applicants plan and implement high-quality Exchange Network projects. This Appendix is also useful when developing the goals, tasks, outcomes and outputs, which are elements of the work plan. Appendix F provides the template for required electronic Semi-Annual Performance Progress Reports that applicants will use to report progress on their projects. Progress reporting is a mandatory condition of the grant award and compliance will be considered in the award of future grants.

Infrastructure: Infrastructure activities support the development of basic IM/IT capabilities that are needed to participate in the Exchange Network, as well as upgrades that are specifically related to the applicant's participation on the Exchange Network. Priority will be given to applicants that are establishing new Nodes or upgrading existing Nodes to version 2.0. As stated above, prior recipients of Node 2.0 infrastructure grants are not eligible for a second Node 2.0 infrastructure grant. Applicants may consider proposals to fund activities which would:

- configure a new Exchange Network Node 2.0 using one of the Node 2.0 reference implementations (complete "node-in-a-box"). This may also include leasing or buying

software and hardware such as servers, processors, storage devices/media, telecommunications products/services, and computer peripherals;
- upgrade an existing Exchange Network Node to version 2.0 using a new Demonstrated Node Configuration (DNC) messaging layer;
- upgrade data flows from Node 1.1 specification to Node 2.0 to ensure continued interoperability with the Exchange Network;
- enhance security features; and/or
- deploy infrastructure that support implementation of the Cross-Media Electronic Reporting Rule (CROMERR).

Node 2.0: Node 2.0 refers to the latest version of the Network Exchange Protocol (version 2.0), Network Node Functional Specification (v 2.0), and Network Web Service Definition Language (WSDL) (v 2.0). All Exchange Network Partners will eventually need to update all version 1.1 Nodes to be compliant with the Node 2.0 specifications.

Node 2.0 does not fundamentally change the architecture of the Exchange Network. Node 2.0 is necessary to maintain interoperability, re-align data and dataflows with industry standards, and decrease costs. This upgrade includes replacing two older standards, enhancing existing technologies and specifications, and simplifying and streamlining the data publishing and dataflow design processes. Exchange Network Partners interested in the latest Node 2.0 information should visit the Exchange Network Website and refer to this link: http://www.exchangenetwork.net/node/index.htm.

Complete Node 2.0 compliant implementations and tools will be made available to simplify the transition. These include:

- Node 2.0 open source reference implementations (complete working versions)
  - Java Node Implementations
    - CDX Next Generation Node (June 2008)
    - CGI Node (June 2008)
    - Windsor Node
    - EnfoTech node
  - .Net Node Implementations
    - CDX .Net Node (July 2008)
    - Windsor .Net Node
    - EnfoTech .Net Node
- Node Certification Tool (August 2008)
- Documentation for
  - Node Certification Tool (August 2008)
  - Reference Node Installations (see Node implementations)
  - Reference Node Operations (see Node implementations)
- Specification documentation
  - Web Service Definition Language (WSDL) v 2.0 (June 2008)
  - Node 2.0 Functional Specification (June 2008)
  - Exchange Network Protocol v 2.0 (June 2008)

Draft and final versions of the above products should be available in the near future for Exchange Network partners and developers. The month that implementations and tools became available is noted above for products that are final.

Some of the advantages of implementing a complete Node 2.0 reference implementation include:

- Minimal Node design costs
- Reduced O&M costs
- Integrated tools for Node administration and monitoring
- Simplified service publishing
- Plug and play approach
- Open Source implementations
- Advanced transaction monitoring and metrics
- Better community support and sharing of new components
- Node design experience behind each reference implementation.

DNCs (the messaging layer of a node that is generated directly from the Web Services Description language) will also be available for those who wish to upgrade their Nodes rather than adopting one of the complete Node 2.0 implementations. The difference between DNCs and Nodes is that Nodes also implement significant internal processes (logging, archiving, etc.), database interactions, administrative interfaces, and flow components in addition to the messaging layer provided by the DNC.

Applicants are reminded that this year represents the final year for funding of Node 2.0 upgrades. Additionally, applicants who received previous year funding for Node 2.0 upgrades will not be considered again for funding of these activities in fiscal year 2009. For more information on the development of Node 2.0, please visit: http://www.exchangenetwork.net/node/ for updates. We encourage applicants refer to http://www.exchangenetwork.net/mailing_list/index.htm to sign up for the email alerts for notice of the most current developments and successes.

Data Exchange and Integration: Data Exchange and Integration activities support the development and exchange of data through the Exchange Network. Priority will be given to deployment of regulatory exchanges and national system flows. Applicants proposing to develop and/or deploy new data exchanges must do so in accordance with the guidance available at http://www.exchangenetwork.net/dev_schema. Applicants who propose deploying an existing exchange must agree to do so in accordance with existing implementation guidance and resources (e.g., XML schema, Flow Configuration Documents) as listed at http://www.exchangenetwork.net/exchanges.

Flow Migration: Flow migration from Node 1.1 to the Node 2.0 specification will require minor changes such as values for new Node 2.0 parameters in accordance with the updated Flow Configuration Documents (FCD) that will be made available for each flow. No changes to the existing schemas are necessary. Version 1.1 and 2.0 flows/nodes can use the same schema. See www.exchangenetwork.net/node/FlowMigrationSummary.doc for more details on flow migration. Network governance will be providing updates to Node 2.0 information and flow migration through the exchange network alerts and open calls for the Network community.

Data exchange development includes the development of XML schema and data exchange documentation. The Flow Documentation Checklist, available at http://www.exchangenetwork.net/exchanges provides detailed information on the required and optional documentation that should be prepared when developing a new data exchange, and provides information on the guidance and procedural documents available to help with developing schema and data exchange documentation. To assist with data exchange development, the Network Operations Board (NOB) offers "early flow development assistance" to Integrated Project Teams (IPTs). Under this plan, the NOB provides IPTs with a short technical review of their draft schema structures. This pro-active support is intended to leverage past implementation experience and Exchange Network guidance, and to help developers identify and resolve schema (and data exchange) design issues as early as possible. This assistance is optional, but recommended, for IPTs developing new schemas or completing major schema upgrades. IPTs interested in this service should contact the NOB co-chairs (http://www.exchangenetwork.net/operations/nob/index.htm).

Data exchange implementation includes activities such as developing or obtaining the appropriate XML schema that are based on data standards, establishing an EPA Central Data Exchange (CDX) account, mapping the applicant's data to the XML schema, verifying the data format, and submitting the data to EPA. The data may be exchanged with other Exchange Network partners in order to test schema and data quality. Possible activities in this area include:

- Implement or upgrade one or more regulatory or national system flows, non regulatory or innovative data exchanges that inform the state, tribal or territorial environmental (including geospatial) and health business needs (Please see Appendix B for list and discussion of data exchanges.)
- Augment an information system to accommodate a new Exchange Network data exchange;
- Develop unique analytical tools that enhance data quality, discovery and integration for all Network Partners;
- Develop Network-wide Web Services, security enhancements, or automated data quality checking, validation tools that will enhance the availability, integrity, quality, and utility of data exchange over the Exchange Network;
- Demonstrate the use of data, published as Web Services by other Exchange Network partners. This use could include the display, analysis, combination, and/or integration of data into local and geospatial applications. (See http://www.exchangenetwork.net, "Build a Node" for a listing of available Web Services.);
- Develop schemas for additional data publishing that increases the body of knowledge available to all Network partners;
- Provide data through published Web Services that enhance the ability of Exchange Network partners to analyze, integrate, and use those data. These Web Services could be selected from the Web Services listing on the Exchange Network Web site or developed by the recipients. XML schema should be registered on the Exchange Network Registry. New Web Services should be registered in the Exchange Network Discovery Service;
- Provide data that will enhance the effectiveness of the state, tribal, or territorial environmental and/or health protection system;

- Use the Exchange Network to exchange, search and publish geospatial data to enhance environmental decision-making and programmatic operations. Such a project might require the development of the dataset before exchange and/or the conversion of existing data flows to conform with open geospatial standards; and
- Enhance information security controls, such as identity proofing, to ensure the security of data transactions among all Exchange Network partners.

Appendix B offers more detailed information on data flows and innovative projects.

Mentoring, Planning and Training: Mentoring, Planning and Training activities further the development of the Exchange Network. Applicants are encouraged to read the discussion in Appendix C related to this area. The following types of activities are included in the Mentoring, Planning and Training group:

- Mentoring activities such as assisting:
  - New or existing Exchange Network partners in establishing Nodes or new data exchanges; and
  - local/municipal governments in establishing connections to the Exchange Network through partnerships;
- Planning activities include, but are not limited to:
  - Convening a community of interest to formulate a plan for collaborative work in a clearly defined data area, e.g., respiratory illness related to environmental contaminants or management of solid waste facilities on tribal lands;
  - Planning and participating in the development of a data standard for use by Exchange Network partners.
- Training activities including, but are not limited to, the development and conduct of training related to:
  - Maximizing the use of the Exchange Network after a Network Node is established;
  - Methods for modernizing data collection, analysis and availability, within a state, tribe, or territory, or identifying business needs that can be served by the Exchange Network within an area; and,
  - New or existing Exchange Network partners in obtaining infrastructure or developing data exchanges.

Note that the training activities do not include the funding of training of grantee personnel on various software or computer languages, but is intended for the development of training by the grantee in relation to activities within the scope of the applicant's work plan.

Collaboration: Collaboration activities support the planning, development, and implementation of collaborative, multi-partner projects that demonstrate the value of the Exchange Network. EPA encourages applicants to collaborate with other state, tribal, or territorial agencies, as well as other organizations that could make a valuable contribution to the development and use of the Exchange Network, particularly if these organizations are not eligible to apply directly to EPA for funding from this grant program. Partners identified in the work plan must have clearly described roles, responsibilities and deliverables that support the goals of the project.

PLEASE REFER TO SECTION IV-4, "PARTNERSHIP AGREEMENTS," BEFORE MAKING ANY FINANCIAL COMMITMENTS TO COLLABORATORS OR LISTING POTENTIAL COLLABORATORS IN YOUR APPLICATION.

Applicants may consider proposing for funding collaboration activities such as the following:

- Pursuing activities listed under the groups above, provided these activities are done in collaboration with other Exchange Network partners;
- Planning and executing a conference on the sustainability of the Exchange Network, e.g., the expansion of the Exchange Network to include other partners or common dataflows;
- Exchanging data not previously available or shared between partners, e.g., environmentally-related human health data; geospatial data; data needed to fill current data gaps; or data related to pollution prevention practices, technologies, or case studies; and
- Exchanging data needed to address regional environmental issues (e.g., for the Great Lakes, Long Island Sound, Chesapeake Bay, Puget Sound, U.S./Mexico border, Gulf of Mexico, etc.). One example of such a project would be to use the Exchange Network to share watershed monitoring data and the analytical results produced by watershed analysis tools.

II. Award Information

II-1. General Information

The FY 2009 President's Budget requests $11,000,000 for the National Environmental Information Exchange Network Grant Program. In FY 2009, EPA expects to award approximately 40 to 50 grants for amounts ranging from approximately $75,000 to $500,000. The exact number of grants will depend on the amount of EPA's appropriation for the grant program, the number of applications submitted to EPA by the application deadline, the amount requested to produce the proposed results, and the competitive review of the applications received.

EPA anticipates most of the awards will be in the $75,000 to $300,000 range. For FY 2009, EPA will limit individual awards to a single applicant to no more than $300,000. A limited number of awards will be made to collaborative, multi-partner grant projects. Budgets for these projects cannot exceed $500,000. EPA will set aside approximately ten percent of the appropriated funds for tribal assistance agreements, but the number and total amount of tribal assistance agreements may be greater, depending on the merit of tribal applications submitted and on the competitive review of those applications. The standard period of performance for each project will be two years.

In appropriate circumstances, EPA reserves the right to fund proposals partially by funding discrete portions or phases of proposed projects. If EPA decides to fund a proposal partially, it will do so in a manner that does not prejudice any applicants or affect the basis upon which the proposal or portion thereof, was evaluated and selected for award, and therefore maintains the integrity of the competition and selection process. EPA expects to announce the FY 2009 Exchange Network Grant program awards in March 2009 and award the grants by August 2009.

Additional Awards: The EPA reserves the right to make additional awards under this announcement, consistent with Agency policy, if additional funding becomes available after original selections are made. Any additional selections for award will be made no later than six (6) months after the original selection decisions.

II-2. Assistance Instrument: Grant or Cooperative Agreement

Grants and cooperative agreements are used by EPA to transfer money, services, or anything of value to a recipient to accomplish a public purpose. The principal purpose of a grant or cooperative agreement *cannot* be to acquire goods or services for EPA's direct use or benefit.

Assistance agreements funded through the Exchange Network Grant Program may be issued in the form of a grant or a cooperative agreement. EPA has the authority to determine whether a grant or cooperative agreement is the most appropriate vehicle for a particular assistance agreement, but EPA will consider the applicant's preference when making this determination. If EPA anticipates having substantial involvement in a proposed project or if all or part of an award is to be issued as EPA-provided in-kind services (i.e., in lieu of direct funding), then EPA will issue the assistance agreement as a cooperative agreement, rather than a grant.

If applicants expect to need only minimal involvement by EPA during the proposed project, then applicants should request assistance in the form of a *grant*. If applicants expect to need substantial involvement by EPA during the project, then applicants should request assistance in the form of a *cooperative agreement*. Substantial involvement by EPA may involve the following: 1) monitoring/direct oversight by EPA; 2) joint operational involvement, participation, and/or collaboration between EPA and the recipient; 3) prior review or approval of project phases or the substantive provisions of proposed contracts found within the scope of the agreement; 4) EPA approval of key recipient personnel; and/or 5) EPA collaboration regarding the scope of work, organizational structure, staffing, mode of operation and other management processes. Assistance recipients that are awarded as cooperative agreements are required to work closely with the EPA Regional Project Officer and other EPA personnel, as determined by EPA, during the performance of the project.

II-3. Funding Mechanism: Direct Funding and/or In-Kind Services

Applicants may request assistance in the form of a cooperative agreement. If they do, they must indicate (in the cover letter, the work plan and detailed item budget) whether they would prefer to receive an award as direct funding, as EPA in-kind services (in lieu of direct funding), or as a combination of both direct funding and in-kind services. EPA will consider an applicant's request for in-kind services, but EPA has the authority to decide whether in-kind services will be provided. This decision generally depends on whether: 1) the project can be accomplished more efficiently by utilizing EPA in-kind services; 2) the scope of the proposed project is within the scope of the vehicle that EPA might use to provide in-kind services (e.g., an existing contract or interagency agreement); and 3) the vehicle that EPA might use to provide in-kind services has sufficient capacity to handle the additional workload. If EPA decides to issue an award in the form of in-kind services, the delivery of these in-kind services must be directed and overseen by

EPA, and *not* by the recipients. EPA's provision of in-kind services generally includes, but is not necessarily limited to, developing contract Statements of Work, providing technical direction to the contractor, reviewing/approving deliverables, and reviewing/approving progress reports and invoices. In-kind services will only be provided if the applicant demonstrates that it will be the primary beneficiary of the in-kind services. The applicant must clearly state in its work plan how the in-kind services will benefit the applicant's project.

II-4. Performance Partnership Grants or Consolidated Grants

An applicant whose organization has an existing Performance Partnership Grant (PPG) with EPA may request that FY 2009 Exchange Network grant recommended funding be incorporated into the PPG. The authority to incorporate Exchange Network Grants into PPGs is discussed in a notice entitled, "Performance Partnership Grants," that was published in the *Federal Register* on August 20, 2004 (69 FR 51756, http://www.epa.gov/fedrgstr/EPA-GENERAL/2004/August/Day-20/g19152.pdf).

Similarly, a territorial applicant whose territory has a Consolidated Grant (CG) with EPA may request that if his/her FY 2009 Exchange Network grant application is recommended for funding, that the award be incorporated into the CG (Public Law 95-134, Title 5, Omnibus Territories Act of 1977).

III. Eligibility Information

The Catalog of Federal Domestic Assistance number for the Exchange Network Grant Program is 66.608 (http://www.cfda.gov). This funding Solicitation Notice is the initial announcement concerning the FY 2009 grant program, and no other announcements are planned at this time.

III-1. Eligible Applicants

Eligible applicants for the Exchange Network Grant Program include states, the District of Columbia, U.S. territories (e.g., American Samoa, Guam, Puerto Rico, and the U.S. Virgin Islands), federally recognized Indian tribes, and inter-tribal consortia of federally recognized tribes.

An inter-tribal consortium is eligible to apply for assistance from the Exchange Network Grant Program if it meets the following criteria:

- the majority of the consortium's members are federally recognized Indian tribes;
- all of the consortium's federally recognized tribal members have authorized the consortium to apply for and receive assistance (if awarded) from the Exchange Network Grant Program; and
- the inter-tribal consortium has adequate accounting controls to ensure that only federally recognized tribal members will benefit directly from the award and receive and manage the awarded funds.

Regional air pollution control districts may apply for assistance if they are legally considered to be agencies or instrumentalities of the state under applicable state laws.

The following entities are ***not*** eligible to apply for funding under the competitive Exchange Network Grant Program: state, tribal, or territorial universities; city, town, county, or regional governments; interstate commissions or compacts; nonprofit organizations, including organizations that represent the interests of co-regulators/co-implementers in executing environmental programs; or for-profit entities. EPA encourages all applicants to work with organizations that could contribute to the development, expansion, and use of the Exchange Network, even if such organizations are not themselves directly eligible to apply for a grant. (See Section III-3 for examples.) Recipients of Exchange Network grant funds awarded to provide administrative support for the state and tribal Exchange Network recipients are not eligible to receive additional Exchange Network funds unless explicitly stated in an applicant's work plan.

Collaboration with Other Organizations: Organizations not directly eligible for funding from this grant program, such as regional compacts and interstate commissions, may be interested in collaborating with eligible applicants to advance the development and use of the Exchange Network. EPA encourages all applicants to work with such organizations in developing their applications and implementing funded projects. Such organizations might include the following: state, tribal, and territorial universities; city, town, county, or regional governments; nonprofit organizations, including organizations that represent the interests of co-regulators/co-implementers in executing environmental programs. See Section IV-4, above for information regarding funding of collaborative partnerships. Applicants should clearly indicate if a subaward will be made to an entity not otherwise eligible to receive an Exchange Network grant. In addition, applicants should be aware that any procurement of goods or services, including a procurement from a non-eligible collaborator, must be consistent with the procurement requirements contained in EPA's regulation at 40 CFR §31.36.

III-2. Cost Sharing or Matching

No cost-sharing or matching of funds is required by applicants.

III-3. Other Eligibility Information

Threshold Criteria Eligibility: Applicants deemed ineligible for funding consideration as a result of the threshold eligibility review will be notified within 15 calendar days of the ineligibility determination.

1. EPA will not fund any activity that has previously received funding by the same applicant. If a proposal is similar to a previously funded activity, applicants are to discuss, briefly, how the previous assistance agreement and their current proposal differ or explain how the current proposal will build on the work that was previously done. If the proposal does not clearly distinguish between activities in the current proposal and how they differ from work previously funded, the proposal will be deemed ineligible for funding, and treated according to the method discussed in IV-6, Other Submission Requirements.

2. Application packages, as described in Section IV and Appendix D, must substantially comply with the application submission instructions and requirements set forth in Section IV and Appendix D of this announcement or else they will be rejected. However, where a page limit is

expressed in Section IV with respect to the application or parts thereof, pages in excess of the page limitation will not be reviewed.

In addition, application packages must be postmarked (or equivalent from an overnight carrier or currier service), or received through www.grants.gov, as specified in Section IV and Appendix D of this announcement, **at or before 11:59 PM on November 21, 2008**.

3. Applications postmarked or received through grants.gov after 11:59 PM Eastern Standard Time (EST) on November 21, 2008, will be considered late and returned to the sender without further consideration unless the applicant can clearly demonstrate that it was late due to EPA mishandling. Applicants should confirm receipt of their application package with Edward Mixon, at (202) 566-2142 or mixon.edward@epa.gov, as soon as possible after the submission deadline—failure to do so may result in your application not being reviewed. EPA will formally notify each applicant of receipt of proposals by electronic mail regardless of the method of submission.

IV. Application and Submission Information

EPA continues its phased approach for grant application submission, evaluation, and award processes through which applicants may apply for National Environmental Information Exchange Network grants in *one of two ways*: 1) hardcopy, mailed or delivered applications, or 2) electronic applications through the federal grants.gov web site. Initially, a streamlined application will be accepted which provides needed information to allow for the evaluation of the project, including work areas to be accomplished, priority activities supported, funding needs, and results expected from the funded proposal.

If you wish to apply with a hard copy submission, please follow the instructions under "Submitting a Hard Copy Application Package" in Appendix D. If you wish to apply electronically via grants.gov, please follow the appropriate instructions under "Submitting an Electronic Submission Application Package" in Appendix D. EPA encourages applicants to submit their application/proposal materials electronically through grants.gov. In either case, the cover letter must be signed by an authorized organizational representative (AOR) who, by virtue of their position is able to obligate staff time on the proposed project.

A checklist of required application materials is available to assist applicants at: http://www.epa.gov/exchangenetwork/grants/index.html. Regardless of mode of submission, application packages must include the following information:

1. **Cover letter** including:
    a. Recipient information, type of vehicle requested (grant/cooperative agreement/ Performance Partnership Grant), and proposed amounts of direct funding or in-kind support
    b. Contact information for the Project Lead
    c. Number of copies of the application (one original plus two copies)
    d. One sentence description of the project's goal
    e. Data exchanges (and data standards) for which the applicant is requesting funding

   f. Any additional partners on the grant
   g. The amount of funds requested
   h. Coordination efforts between the IM/IT and Environmental/Health Programs
   i. Signature of executive level Authorized Organizational Representative (AOR)
2. **Project Narrative/Work Plan,** including a Quality Assurance Narrative Statement which addresses the Environmental Results (Section I-1) and Evaluation Criteria (Section V) of this announcement.
3. **Budget Narrative** Attachment Form **and Detailed Itemized Budget**
4. Copy of **Negotiated Indirect Cost Rate Agreement**, if indirect costs are included in the budget or a copy of the submitted application to the cognizant federal agency
5. **Resume(s)** of the Project Manager(s) or Project Lead(s)
6. **SF 424, Application for Federal Assistance**
7. **Additional information needed from inter-tribal consortium** (if applicable)

Please note that after a potential grantee is notified of their selection for a recommendation for an award or partial award, additional documents will be needed to complete the funding package. Further instructions for submittal of these materials will be provided at that time.

Please see Appendix D to find complete application submittal instructions for hard copy and grants.gov submittals. Appendix D outlines the format for the project narrative/work plan (no more than ten-single-spaced pages, 10 pt. font size) and provides more detailed application instructions. **EPA will not review pages in excess of the project narrative/workplan page limitation of ten pages**.

An updated application package will be requested from those eligible entities whose initial application package has been successfully evaluated and preliminarily recommended for award. Those entities will be provided with instructions and a due date for submittal of the final application package. EPA expects to notify the applicants of its selection decisions after they are made in March 2009. At that point, successful applicants will be required to submit any remaining documents required to process awards (e.g., final SF424, SF424A). OEI anticipates that all grants will be awarded by August 2009.

IV-1. Address to Request Application Package

This Solicitation Notice is available electronically on the Exchange Network Grant Program Web site, http://www.epa.gov/exchangenetwork/grants/index.html. The required application forms are available from EPA's Office of Grants and Debarment at http://www.epa.gov/ogd/AppKit/application.htm. Applicants who are unable to download the forms from this Web site may contact Edward Mixon at (202)-566-2142 or mixon.edward@epa.gov to request copies of the application forms by fax.

IV-2. Submission Date and Time

If submitted in hard copy, the *original application package and two copies* must be postmarked (or equivalent from an overnight carrier or currier service) **no later than 11:59 PM Eastern Standard Time, November 21, 2008**. Application packages postmarked (or equivalent from overnight carrier) *after* the published closing date and time will be returned to the sender without further consideration. Applications submitted through grants.gov (http://www.grants.gov) will be automatically rejected if not submitted **at or before 11:59 PM Eastern Standard Time on November 21, 2008**.

IV-3. Intergovernmental Review

This funding opportunity is *not* subject to Executive Order (EO) 12372, "Intergovernmental Review of Federal Programs." (EO 12372 asks Federal agencies to rely on state and local processes for consulting with state and local government officials who would be directly affected by proposed federal assistance or who would provide non-federal funds for the proposed activities.)

IV-4. Partnership Agreements

EPA awards funds to one eligible applicant as the recipient even if other eligible applicants are named as partners or co-applicants or members of a coalition or consortium. The recipient is accountable to EPA for the proper expenditure of funds.

Funding may be used to provide subgrants or subawards of financial assistance, which includes using subawards or subgrants to fund partnerships, provided the recipient complies with applicable requirements for subawards or subgrants including those contained in 40 CFR Parts 30 or 31, as appropriate. Applicants must compete contracts for services and products, including consultant contracts, and conduct cost and price analyses, to the extent required by the procurement provisions of the regulations at 40 CFR Parts 30 or 31, as appropriate. The regulations also contain limitations on consultant compensation. Applicants are not required to identify subawardees/subgrantees and/or contractors (including consultants) in their proposal/application. However, if they do, the fact that an applicant selected for award has named a specific subawardee/subgrantee, contractor, or consultant in the proposal/application EPA selects for funding does not relieve the applicant of its obligations to comply with subaward/subgrant and/or competitive procurement requirements as appropriate. **Please note that applicants may not award sole source contracts to consulting, engineering or other firms assisting applicants with the proposal solely based on the firm's role in preparing the proposal/application.**

Successful applicants cannot use subgrants or subawards to avoid requirements in EPA grant regulations for competitive procurement by using these instruments to acquire commercial services or products from for-profit organizations to carry out its assistance agreement. The nature of the transaction between the recipient and the subawardee or subgrantee must be consistent with the standards for distinguishing between vendor transactions and subrecipient assistance under Subpart B Section .210 of OMB Circular A-133, and the definitions of subaward at 40 CFR 30.2(ff) or subgrant at 40 CFR 31.3, as applicable. EPA will not be a party to these transactions. Applicants acquiring commercial goods or services must comply with the competitive procurement standards in 40 CFR Part 30 or 40 CFR Part 31.36 and cannot use a subaward/subgrant as the funding mechanism.

Section V of the announcement describes the evaluation criteria and evaluation process that will be used by EPA to make selections under this announcement. During this evaluation, except for those criteria that relate to the applicant's own qualifications, past performance, and reporting history, the review panel will consider, as appropriate and relevant, the qualifications, expertise, and experience of:

(i) an applicant's named subawardees/subgrantees identified in the proposal/application if the applicant demonstrates in the proposal/application that if it receives an award that the subaward/subgrant will be properly awarded consistent with the applicable regulations in 40 CFR Parts 30 or 31. For example, applicants must not use subawards/subgrants to obtain commercial services or products from for profit firms or individual consultants.

(ii) an applicant's named contractor(s), including consultants, identified in the proposal/application if the applicant demonstrates in its proposal/application that the contractor(s) was selected in compliance with the competitive Procurement Standards in 40 CFR Part 30 or 40 CFR 31.36 as appropriate. For example, an applicant must demonstrate that it selected the contractor(s) competitively or that a proper non-competitive sole-source award consistent with the regulations will be made to the contractor(s), that efforts were made to provide small and disadvantaged businesses with opportunities to compete, and that some form of cost or price analysis was conducted. EPA may not accept sole source justifications for contracts for services or products that are otherwise readily available in the commercial marketplace.

EPA will not consider the qualifications, experience, and expertise of named subawardees/ subgrantees and/or named contractor(s) during the proposal/application evaluation process unless the applicant complies with these requirements.

Roles and Responsibilities of Partners: Those applicants whose projects include:

Collaboration activities must have one or more formal partners. Formal partners are defined as organizations that have entered into, or will enter into, a legally binding agreement with the applicant for a subgrant of financial assistance or an intergovernmental agreement. Commercial vendors providing goods or services under procurement contracts may not be formal partners.

Proposals with one or more formal partners, must clearly describe the roles and responsibilities, deliverables and products of each partner. Each partner must independently either hold or have the independent means to collect, improve or interpret information to share on the Network. These partners could be other agencies within the same state, territory, or tribe, or agencies in other states, territories, or tribes. However, they cannot be departments within the same agency nor agencies within the same secretariat.

EPA programs, regional offices, or contractors cannot be formal project partners under a cooperative agreement, despite significant EPA involvement in the project. The application must be submitted by a single lead organization that will be the recipient of EPA funds. The work plan must clearly indicate the roles and responsibilities of each project participant and how the funds will be distributed by the lead organization, consistent with 40 CFR Part 31, if the applicant receives an award. Applicant work plans must include information regarding any subgrants that are to be awarded. The lead organization must assume full responsibility for overseeing the project and for distributing funds to the other project partners.

IV-5. Funding Restrictions

Applicants may use funding from the FY 2009 Exchange Network Grant Program for costs associated with personnel salaries and fringe benefits, Intergovernmental Personnel Act Agreements (IPAs) travel, travel related to Exchange Network activities, equipment, supplies, contractual costs, in-kind services provided by EPA, and indirect costs. Applicants may *not* use funding from the FY 2009 Exchange Network Grant Program for construction costs. (See Appendix A for definition.)

Operations and Maintenance (O&M): Proposed projects must focus on Exchange Network planning, development, and implementation activities, rather than on operations and maintenance. EPA will not fund routine O&M costs.

Workshops and Conferences: Applicants may propose to conduct workshops/conferences, but such workshops/conferences must be initiated, advertised, and conducted for the benefit of the recipient and other state, tribal, territorial, or local representatives or public participants. (Please see discussion in Section I-3.) Such events may not be conducted primarily for EPA's benefit. If applicants expect to receive any program income (e.g., from collecting registration fees), then the anticipated program income must be included in the proposed budget. Program income may be earned, but it must be deducted from the total allowable costs of the project unless the applicant requests that a term and condition be included in the grant allowing the recipient to add program income to support the project objectives. Please see 40 C.F. R. §31.25 (g).

Pre-Award Costs: Applicants may request funds to cover pre-award costs that are incurred 90 days or less before the award date. If EPA determines that the requested pre-award costs comply with the Office of Management and Budget Circular A-87, "*Cost Principles for State, Local, and Indian Tribal Governments*" (http://www.whitehouse.gov/omb/circulars/a087/a87_2004.html), and that the costs are justified as allocable to the project, then these costs may be included as allowable expenditures at the time that the assistance award document is prepared. However, if for any reason, EPA does not fund the application or the amount of the award is less than applicants anticipated, then EPA is under no obligation to reimburse applicants for these costs. Thus, applicants incur pre-award costs at their own risk.

Management Fees: When formulating budgets for proposals/applications, **applicants must not include management fees or similar charges in excess of the direct costs and indirect costs at the rate approved by the applicants cognizant audit agency, or at the rate provided for by the terms of the agreement negotiated with EPA.** The term "management fees or similar charges" refers to expenses added to the direct costs in order to accumulate and reserve funds for ongoing business expenses, unforeseen liabilities, or for other similar costs that are not allowable under EPA assistance agreements. Management fees or similar charges may not be used to improve or expand the project funded under this agreement, except to the extent authorized as a direct cost of carrying out the scope of work.

IV-6. Other Submission Requirements

Pre-proposal Assistance and Communications: In accordance with EPA's Assistance Agreement Competition Policy (EPA Order 5700.5A1), EPA staff will not meet with individual applicants to discuss draft proposals, provide informal comments on draft proposals, or provide advice to applicants on how to respond to ranking criteria. Applicants are responsible for the contents of their proposals. However, EPA will respond to questions in writing from individual applicants regarding threshold eligibility criteria, administrative issues related to the submission of the proposal, and requests for clarification about the announcement.

Confidential Business Information: In accordance with 40 CFR 2.203, applicants may claim all or a portion of their application/proposal as confidential business information. EPA will evaluate confidentiality claims in accordance with 40 CFR Part 2. Applicants must clearly mark applications/proposals or portions of applications/proposals they claim as confidential. If no claim of confidentiality is made, EPA is not required to make the inquiry to the applicant otherwise required by 40 CFR 2.204(c)(2) prior to disclosure.

Data Universal Number System (DUNS): Please note that the applicant's Dun and Bradstreet (D&B) Data Universal Number System (DUNS) number must be included on the SF-424. Organizations may obtain a DUNS number at no cost by calling the toll-free DUNS number request line at 1-866-705-5711.

V. Application Review Information

V-1. Evaluation Criteria

Each application package, determined to be eligible based on criteria listed in Section III, will be evaluated and scored using the criteria outlined below. Applicant's project narratives must address all of these criteria. The most highly scored proposals will be provided to the Selection Official for final funding consideration. See Section V-2 for more details on the review and selection process.

Expected Environmental Outputs, Outcomes and Environmental Results (20 points): EPA will evaluate application packages based on how well and clearly the applicant has articulated project outputs, outcomes and environmental results(5 points), and whether they are tied to the intermediate outcomes as defined in Section I of this Solicitation Notice (i.e., burden reduction, cost savings, improved quality of data, etc.)(5 points). EPA will also evaluate the applicant's plan for tracking and measuring their progress towards achieving the expected outputs, outcomes, and environmental results of the project proposal, including those identified in Section I (10 points). Please note that applicants must substantively link technology-only proposals (e.g., node or data flow upgrade to 2.0 specification) to the anticipated environmental outcomes within their work plans.

Feasibility/Approach (20 points): The application package will be evaluated based on the following items:

i. Feasibility of the design of the project and the relationship between project goals, outputs, outcomes, and environmental results.
ii. How clearly it articulates the roles and responsibilities of each partner, the clarity of milestones, and how well the work is supported by a schedule that ensures the work will be accomplished during the project period.

iii. Degree of clear coordination between the IM/IT department and the Environmental/Health programs on this project, e.g., regularly scheduled meetings between the two departments described in the work plan, a coordination plan in the work plan, or as described in Appendix D.
iv. Whether the applicant identified potential problem areas and project dependencies.
v. The potential for other Exchange Network partners to build on its results.

Relevance/Significance (30 points)**:** The application package will be evaluated based on how well it advances the Exchange Network program objectives, and on whether, and how well, they address one or more of the following Exchange Network priorities: 1) deploying regulatory and national system flows, 2) establishing new 2.0 Nodes, 3)upgrading Nodes, 4) Network publishing, 5) establishing non-regulatory data flows and 6) developing innovative projects.(Please see Appendix B or the Exchange Network Website (http://www.exchangenetwork.net/exchanges/) for more detail.) Activities related to mentoring, planning and training will be evaluated on how consistent they are with the examples discussed in Appendix C. Proposals that do not address any of these priorities will receive 0 points under this factor. In order to be eligible to receive **the maximum** 30 points under this factor , the proposal must, at a minimum, address deploying regulatory and national system flows. **Proposals that do not address regulatory or national system flows will only be eligible for up to 25 points under this factor.**

Budget, Resources and Key Personnel (10 points): The budget will be evaluated based on its reasonableness and adequacy to support and complete the proposed work within two years and the sufficiency of its detail in describing the cost associated with the activities outlined in the work plan. The application package will also be evaluated on whether it clearly and sufficiently identifies the key personnel needed to complete the project, in terms of experience, expertise, qualifications and/or availability.

Environmental Results Past Performance (20 points): Applicants will be evaluated based on the extent to which they adequately documented and/or reported on their progress towards achieving the expected results (e.g., outputs and outcomes) under federally and/or non-federally funded assistance agreements (an assistance agreement is a grant or cooperative agreement and not a contract) performed within the last three years (no more than 5), including any current or prior Exchange Network Grants. If progress was not made, applicants need to adequately document and/or report why not. In evaluating applications under this factor, EPA will consider the information provided by applicants, the semi-annual and final reports for Exchange Network grants, and may also consider relevant information from other sources including agency files (e.g., to verify and/or supplement the information supplied by applicants). If you do not have any relevant or available environmental results past performance information, please indicate this in the application package and you will receive a neutral score (10 points) for this factor. If you do not provide any response for this item, you may receive a score of zero for this factor. In addition, an applicant’s score under this factor may be reduced if any of the semi-annual or final reports are missing.

V-2. Review and Selection Process

Each eligible application, based on the Section III eligibility review, will be evaluated and ranked by a panel of EPA representatives. The reviewers will base their evaluation on the criteria listed in Section V-1. The EPA reviewers will submit comments and rankings and make funding recommendations to the Selection Official, the Assistant Administrator of the Office of Environmental Information (OEI) or his/her designee who will make the final funding decisions.

Other Evaluation Factors: In making the final funding decisions from among the most highly scored proposals and recommendations of the review panel, the EPA selection official may also consider one or more of the following factors*:*

- EPA Program Offices' ability and/or readiness to support the proposed activities;
- geographic distribution of funds;
- balance among data exchange activities or other assistance activities;
- balance among individual, partnership and tribal proposals;
- EPA's ability to provide any requested in-kind services and whether the applicant is the primary beneficiary of the in-kind services; and
- overlap in proposals from the same state, tribe or territory.

Applicant's who have been preliminarily selected for award may be asked to modify their work plans or budgets before making final funding recommendations. However, applicants cannot make any changes to their work plans/budgets or application packages that would affect the basis upon which the application (or portions of the application) was recommended or selected for funding and no material changes can be made to the application package.

V-3. Anticipated Award Dates

EPA plans to issue selection decisions in March 2009. EPA plans to issue the awards by August 2009.

VI. Award Administration Information

VI-1. Award Notices

EPA anticipates notification to successful applicants will be made via telephone, electronic or postal mail by March 2009. This notification, which advises the applicant that it has been preliminarily selected and is being recommended for award, is not an authorization to begin performance. At this time, final applications and any other required information will be requested from those applicants preliminarily recommended for award. Those entities will be provided with instructions and a due date for submittal of the final application package. The potential grantee forfeits the award if this information is not supplied by the date designated by the EPA Grants Officer. The award notice signed by the EPA Grants Officer is the authorizing document and will be provided through postal mail. At a minimum, this process can take 120 days from the date of selection. The written Assistance Agreement issued by EPA's Grants and Interagency Agreements Management Administration (GIAD) is the authorizing document. The agreement will be mailed to the recipient via the U.S. Postal Service. The original must be signed, dated, and returned to the GIAD within three calendar weeks after it is received by the recipient or within any extension of time as may be granted by EPA. EPA plans to issue the awards by August 2009.

VI-2. Administration and National Policy Requirements

Each Assistance Agreement will include a set of Administrative Conditions and Programmatic Conditions. Examples and excerpts of some of the conditions are outlined below. *Not all of the conditions described below would necessarily apply to all award recipients.*

Electronic Method of Payment: By accepting this agreement for the electronic method of payment through the Automated Clearing House (ACH) network using the EPA-ACH payment system, the recipient agrees to do the following: a) request funds based on the recipient's immediate disbursement requirements by presenting an EPA-ACH Payment Request to the EPA Servicing Finance Office; b) provide timely reporting of cash disbursements and balances in accordance with the EPA-ACH Payment System Recipient's Manual; and c) impose the same standards of timing and reporting on sub-recipients, if any. Failure on the part of the recipient to comply with the above conditions may cause the recipient to be placed on the reimbursement payment method.

Financial Status Report: As required by EPA regulations, the recipient agrees to submit a final Financial Status Report (Standard Form 269) within 90 days after the end of the budget period to EPA's Las Vegas Financial Management Center. When the recipient submits a final FSR, the recipient will make an adjustment for the amount of Federal funds, if any, received in excess of the EPA share of the reported total budget period costs.

Payment to Consultants: EPA contribution to the salary (excluding overhead) paid to individual consultants retained by recipients or by a recipient's contractors or subcontractors shall be limited to the maximum daily rate for a Level IV of the Executive Schedule (formerly GS-18), to be adjusted annually. This limit applies to consultation services of designated individuals with specialized skills who are paid at a daily or hourly rate. As of January 1, 2008, the limit is $571.12 per day and $71.39 per hour. This rate does not include transportation and subsistence costs for travel performed (the recipient will pay these in accordance with their normal travel reimbursement practices).

Subagreements with firms for services which are awarded using the procurement requirements in 40 CFR 30 or 31, as applicable, are not affected by this limitation unless the terms of the contract provided the recipient with responsibility for the selection, direction, and control of the individuals who will be providing services under the contract at an hourly or daily rate of compensation. See 40 CFR 31.36(j) or 30.27(b).

Indirect Cost Rates: If the recipient does not have a current, established indirect cost rate, the recipient must agree to prepare an indirect cost rate proposal and/or cost allocation plan in accordance with OMB Circular A-87, *Cost Principles for State, Local, and Indian Tribal Governments*. If EPA is the cognizant federal agency, the recipient must submit its indirect cost rate proposal within six months after the close of the state and local unit's fiscal year to EPA's Financial Analysis and Rate Negotiation Service Center, Office of Acquisition Management, 1200 Pennsylvania Ave., NW, MC 3802R, Washington, DC 2046. Tribal governments must submit their indirect cost request to the Department of Interior, National Business Center.

VI-3. Reporting

Semi-Annual Performance Progress Reports*:* Reporting is an important obligation that award recipients agree to undertake when they sign an Assistance Agreement. Both EPA and the recipients are accountable to Congress and to the public for the proper and effective use of Exchange Network assistance funds. Award recipients will submit semi annual and final technical reports through EPA's Central Data Exchange (CDX) using a web form that replicates the current reporting form. Detailed instructions for registering with and reporting through CDX will be provided to successful applicants at the time of award. The form can be found at the following address: http://www.epa.gov/exchangenetwork/grants/index.html . EPA expects all award recipients to submit complete and timely reports, and it will consider compliance with reporting requirements when evaluating future applications for financial assistance. The EPA Project Officer will be assigned when the award is issued.

These progress reports must be submitted within one month of the end of the reporting period. The reporting periods are from October through March (report due April 30) and from April through September (report due October 31). The first reporting period for the FY 2009 Exchange Network assistance agreements will be from the start of the project period through March 31, 2010 and the first semi-annual report will be due to EPA on April 30, 2010. Please use the *Semi-Annual Performance Progress Reports* form in Appendix F.

In addition to the semiannual reports, the recipient agrees to submit to the EPA Project Officer within 90 days after the expiration or termination of the approved project period a final report using the *Semi-Annual Performance Progress Reports* form. (Please see Appendix F or http://www.epa.gov/exchangenetwork/publications/index.html .)

Final Financial Status Report: As indicated in Section VI – 2, award recipients must submit a final Financial Status Report to EPA within 90 days after the end of the project budget period.

VI-4. Dispute Resolution Provision

Assistance agreement competition-related disputes will be resolved in accordance with the dispute resolution procedures published in 70 FR (Federal Register) 3629, 3630 (January 26, 2005) which can be found at http://www.epa.gov/ogd/competition/resolution.htm. Copies of these procedures may also be requested by contacting Edward Mixon at 202-566-2142 or mixon.edward@epa.gov. All other disputes will be resolved in accordance with EPA regulations at 40 C.F.R. §30.36 or 40 C.F.R. §31.70, as appropriate.

VII. Agency Contacts

The primary EPA Headquarters point of contact is:

Edward Mixon, Exchange Network Grant Program Manager
Office of Information Collection, Office of Environmental Information
Phone: (202) 566-2142 / Facsimile: (202) 566-1684 / Email: mixon.edward@epa.gov.

Mailing Address (*for U.S. Postal Service Deliveries*):
Edward Mixon
U.S. Environmental Protection Agency
Office of Environmental Information
Office of Information Collection
1200 Pennsylvania Avenue, NW, Mail Code 2823-T
Washington, DC 20460

Physical Address (*for overnight, courier, or messenger deliveries*):
Edward Mixon
U.S. Environmental Protection Agency
Office of Environmental Information
Office of Information Collection
1301 Constitution Avenue, NW
EPA West Building, 6th Floor, Room 6416-V
Washington, DC 20004

VIII. Other Information

VIII-1. Exchange Network References

The following Web sites and documents may be of interest to assistance agreement applicants and other Exchange Network partners:

- Exchange Network Grant Program: http://www.epa.gov/exchangenetwork/grants/index.html. This site provides previous state and tribal activities as examples of Exchange Network activities.
- Central Data Exchange (CDX): http://www.epa.gov/cdx. This site provides information about CDX, which is EPA's Node on the Exchange Network.
- Exchange Network: http://www.exchangenetwork.net. This site provides more information on current Exchange Network documents, Nodes, data exchanges, and includes the Registry of XML Schema.
- The Environmental Data Standards Council: http://www.exchangenetwork.net/standards. Information from EDSC has been migrated to this web site to provide authoritative information on data standards and related information.

VIII-2. Other EPA Financial Assistance Programs

EPA offers a number of other financial assistance programs at various times of the year that may be of interest to states, territories, tribes, and inter-tribal consortia. General information about financial assistance programs can be found on the Office of Grants and Debarment Web site at http://www.epa.gov/ogd.

Additional information can be found at the following Web sites:

- American Indian Environmental Office (AIEO): http://www.epa.gov/indian/tgrant.htm
- Office of Air and Radiation (OAR): http://www.epa.gov/air/grants_funding.html
- Office of Enforcement and Compliance Assurance (OECA): http://www.epa.gov/compliance/state/grants/stag/opportunities.html

- Office of Prevention, Pesticides, and Toxic Substances (OPPTS)/Office of Pollution Prevention and Toxics (OPPT): http://www.epa.gov/oppt/pubs/grants.htm
- Office of Solid Waste and Emergency Response (OSWER)/Brownfields Cleanup and Redevelopment: http://www.epa.gov/brownfields/pilot.htm
- Office of Water (OW): http://www.epa.gov/water/funding.html

Appendix A

Definitions

Central Data Exchange (CDX)

EPA's CDX is the point of entry to the National Environmental Information Exchange Network (Exchange Network) for environmental data exchanges to the Agency. CDX provides the capability for submitters to access their data through the use of Web Services. CDX enables EPA and participating Program Offices to work with stakeholders - including state, tribal and local governments and regulated industries - to enable streamlined, electronic submission of data via the Internet.

Communities of Interest

A community of interest is a group of Exchange Network stakeholders who share an interest in the exchange of a specific set of environmental data.

Construction

Construction is the erection, building, alteration, remodeling, improvement, or extension of buildings, structures or other property. Construction also includes remedial actions in response to a release, or a threat of a release, of a hazardous substance into the environment as determined by the CERCLA of 1980.

Data Standard

A data standard documents an agreement on representation, format and definition of common data exchanged. Exchange Network partners must use data standards that have been approved by the Exchange Network Leadership Council (ENLC). The ENLC has subsumed the activities of the Environmental Data Standards Council (EDSC). A list of ENLC/EDSC-approved data standards is shown in Appendix C. Also see information at http://www.exchangenetwork.net/standards.

Data Element

A data element is the smallest unit of information stored in and exchanged among Exchange Network partners' information systems. Examples of data elements are the facility name, DUNS number, and inspection date.

Data Exchange Template (DET) A data exchange template is a standardized format that identifies the types of information required/allowed in a particular document or data exchange. Data exchange templates contain no data, but they define the format for exchange according to data standards and trading partner agreements. A standard template for DET's is available on the Exchange Network Website (http://www.exchangenetwork.net).

Demonstrated Node Configurations (DNCs)

Demonstrated Node Configurations are the messaging layer for Web Services that interacts with the Exchange Network. It is based on the Network WSDL which defines the Web Services.

Environmental Information Exchange Network (Exchange Network)

The Exchange Network is an Internet and standards-based information network among EPA and its partners in states, tribes, and territories. It is designed to help integrate information, provide secure real-time access to environmental information, and support the electronic collection and exchange of high-quality data and information. The Exchange Network provides a more efficient way of exchanging environmental information at all levels of government. It significantly improves the way EPA and its state, tribal, and territorial partners send and receive information.

Extensible Markup Language (XML)

Extensible Markup Language is a flexible language for creating common information formats and sharing both the format and content of data over the Internet and elsewhere. XML, a formatting language recommended by the World Wide Web Consortium (W3C). For guidance on the development of XML schema for the Exchange Network or related activities of the Network Technical Group, see the Exchange Network Web site at http://www.exchangenetwork.net.

Flow Configuration Documents (FCD's) FCD's are the principle document that captures the detailed data exchange processing design and roles governing the data exchange using narrative text, diagrams and examples. A standard template for FCD's is available on the Exchange Network Website http://www.exchangenetwork.net). For more information, refer to the Flow Configuration Checklist v1.1 at: http://www.exchangenetwork.net/dev_schema/FlowDocChecklist_v1.1pdf.

Geographic Information Systems

Geographic Information Systems (GIS) include software and hardware systems that relate and display collected data in terms of geographic or spatial location. GIS allow users to collect, manage, and analyze large volumes of geospatial data and metadata. EPA and its partners use GIS systems to conduct complex environmental analyses.

Geospatial Data

Geospatial data are data that identify, depict, or describe the geographic locations, boundaries, or characteristics of the Earth's inhabitants or its natural or human-constructed features. Geospatial data include geographic coordinates (e.g., latitude and longitude) that identify a specific location on the Earth; data that are linked to geographic locations or have a geospatial component (e.g., socio-economic data, land use records and analyses, land surveys, homeland security information, and environmental analyses). Geospatial data may be obtained using a variety of approaches and technologies, including things such as surveys, satellite remote sensing, Global Position System (GPS) hand-held devices, and airborne imagery and detection devices.

Geospatial Technologies

Geospatial technologies include the computer hardware and software that are commonly used to collect, import, store, manipulate, analyze, and display digital geospatial data. These technologies include GIS, global positioning systems (GPS), remote sensing, and visualization systems.

In-Kind Services

Services provided by EPA contractors and consultants on specific parts of the project for the recipient. The recipient can request this type of service as part of the grant proposal, if the in-kind work is directly related to the recipient's proposal and the applicant is the primary beneficiary of the work. However, EPA reserves the right to decide whether or not in-kind services will be provided. The recipient may not direct the work provided through in-kind services. These services are managed by EPA.

Integrated Project Team

A group of individuals comprised of partner and EPA staff, support contractors and technology vendors organized to design and implement a specific exchange.

Metadata

Metadata are data or information that describes other data. Examples include data that describe how or where the data were collected, whether or not the data comply with agreed-upon data standards, or how the data will be used.

National System Flows

Ten National System Flows identified by the Exchange Network Leadership Council in the Exchange Network Strategic Plan (http://www.exchangenetwork.net). The flows are: Air Facility System (AFS); Air Quality System (AQS); Beach Notification; Facility ID; Integrated Compliance Information System – National Pollutant Discharge Elimination System (ICIS-NPDES); Emission Inventory System (EIS); Resource Conservation and Recovery Act Information System (RCRAInfo); Safe Drinking Water Identification System (SDWIS); Toxics Release Inventory System (TRIS); and Water Quality Exchange.

Network Authorization and Authentication Services

Network Authorization and Authentication Services (NAAS) are a set of centralized information security services that Exchange Network partners can use to authenticate and authorize their users. NAAS provides an efficient way for Exchange Network participants to exchange data, without having to build and maintain their own security system. NAAS supports many levels of security, from PIN/passwords to public Key Infrastructure. All NAAS operations are conducted over a Secure Socket Layer (SSL) channel using 128-bit encryption.

Network Publishing

Network publishing is a term that refers to using Web Services to make data available to Network users by querying nodes and returning environmental data in the form of XML documents. These services are also called data services. Once these data services are deployed, they can be used in a number of ways such as populating Web pages, synchronizing data between sites, viewing data in a Web service client, or building new sources of data into an integrated application. In other words, Network publishing is a specific subset of the many possible types of Web Services. Other Web service types include data submission, security, quality assurance, notification, and status.

Node

A Node is a Web service enabled server (hardware and software) that provides a point for exchanging information over the Internet. Exchange Network Nodes can gain access to and transmit information using Web Services. In order to achieve interoperability among Nodes, all Nodes must be set up according to the Exchange Network specifications. Specifications, protocols, tools, code, and documentation for building a functioning Exchange Network Node are available at http://www.exchangenetwork.net.

Node 2.0

Node 2.0 refers to the newest version of the Network Exchange Protocol (v 2.0) and the Network Node Functional Specification (v 2.0).

Node Client

A Node client is an application (software code) that can generate Web service messages for using the Exchange Network. A Node client can do the following:

- Submit data in XML format to EPA or other partners using the Exchange Network and
- Request data in XML format from EPA or other partners using the Exchange Network.

Several Node Client applications that are very user friendly are available on the Exchange Network Web site already. More are on the way. A Node client software developer kit (SDK) is also available to help you integrate Node client requests into your applications.

Unlike Nodes, Node clients can *not* publish data on the Exchange Network (i.e., they can not listen for or respond to data queries from other Exchange Network partners)

Operational Exchange Network Node

An Exchange Network Node is *operational* if it meets all of the following criteria:

- Demonstrates conformance with the Network Exchange Protocol version 2.0 and Network Node Functional Specification version 2.0 by successfully passing the Node Certification Tool test suite.
- Implements the minimum Exchange Network security practices (e.g., including the use of Network Authorization and Authentication Services);
- Submits data in XML format to EPA or other Exchange Network partners;
- Receives data in XML format from EPA or other Exchange Network partners; and
- Demonstrates ability to publish data to the Exchange Network by responding to specific data queries from authorized Exchange Network partners.

When developing Exchange Network Nodes, applicants should refer to the "Build a Node" section on the Exchange Network Web site. (See http://www.exchangenetwork.net.) This site contains technical specifications and protocols, implementation guidance and testing tools.

Outcome

The term "outcome" means the result, effect or consequence that will occur from carrying out an environmental program or activity that is related to an environmental or programmatic goal or objective. Outcomes may be environmental, behavioral, health-related or programmatic in nature, must be quantitative, and may not necessarily be achievable within an assistance agreement funding period.

Output

The term "output" means an environmental activity, effort, and/or associated work products related to an environmental goal or objective, that will be produced or provided over a period of time or by a specified date. Outputs may be quantitative or qualitative but must be measurable during an assistance agreement funding period.

Schema

An XML schema defines the structure of an XML document. An XML schema defines things such as which data elements and attributes can appear in a document; how the data elements relate to one another; whether an element is empty or can include text; which types of data are allowed for specific data elements and attributes; and what the default and fixed values are for elements and attributes. The schemas can be found at http://www.exchangenetwork.net Web site. Click on Network Registry to find the XML registry. A set of Network quality assurance Web services is available to validate your XML documents against the schemas using a standard parser. A list of procedural and guidance documents related to schema development is available in the Flow Documentation Checklist document on the Exchange Network Website (www.exchangenetwork.net).

Schematron

Schematron is an open source application that is used for validating XML documents against business rules and returning error reports. It uses XML stylesheet (XSLT) technology. The Network Quality Assurance Services use Schematron to validate XML documents against the business rules, as well as supporting a standard parser for schema validation. (.Net Reader).

Trading Partner Agreement (TPA)

A Trading Partner Agreement (TPA) defines in writing, for specific data exchanges, the participating partners' individual and joint responsibilities in stewardship, security, and other items essential for the effective exchange of information between two or more trading partners on the Exchange Network. A TPA must be developed within six months after the exchange has begun unless a waiver is obtained. The Network Policy Framework including the TPA Procedure can be found at: http://www.exchangenetwork.net/policy/index.htm. There are a few examples posted on the exchangenetwork.net site. In the near future there will a section on the site devoted to TPAs.

Web Form

A standard interface that can be downloaded from the Internet. A Web form contains text boxes for a user to enter data. Users can then submit the form (e.g., environmental reports) to the receiver.

Web Services

Web Services are a software system designed to support interoperable machine-to-machine interaction over a network. They make it easier to conduct work across organizations regardless of the types of operating systems, hardware/software, programming languages, and databases that are being used.

Appendix B

Suggested Exchange Network Data Exchange Activities

This Appendix outlines the data exchange activities that applicants should consider when applying for the FY 2009 Exchange Network Grant Program. The Appendix contains four subsections: Definition of Standard Milestones for EPA Information System or Data Exchanges, Regulatory and National System Flows, Non-Regulatory Data Exchanges and Innovative Data Exchanges. This Appendix highlights the EPA Program Office activities related to flows and provides suggested activities for applicants to consider when developing their proposal.

The Exchange Network Grant Program supports a variety of activities, including the development of common data standards, formats, and trading partner agreements for sharing data over the Exchange Network and implementation of collaborative, innovative uses of the Exchange Network. It also supports the standardization, exchange, and integration of geospatial information to address environmental, natural resource, and related human-health issues.

As part of the standardization mentioned above, grantees must utilize data standards that have been previously approved by the ENLC as they develop Exchange Network products and services. In most cases, the data standards needed in implementation will have previously been incorporated in the major EPA systems and Exchange Network data flows. These data standards can simply be reused. For detailed information on each ENLC approved standard please refer to the Exchange Network website at http://www.exchangenetwork.net/standards/index.htm. There is also a separate document (located at the web site cited above) to assist you with understanding how these standards have been implemented within the specific EPA systems. Please note that in some cases you may need to identify areas for new data standardization. If so, please indicate in your proposal the data standards needed and project the funding required to support that work.

The success of the Exchange Network will ultimately depend on how EPA and its partners use the data and information that are exchanged to enhance decision-making and programmatic operations. EPA encourages all partners to use the Exchange Network to meet their business needs. This could include exchanging data that supports national environmental systems, as well as data that support particular state, territorial, and tribal needs. In addition, we encourage applicants to view other projects, both under development and completed, at http://www.exchangenetwork.net/exchanges/. Innovative projects must demonstrate that they will be net-centric and result in the development of reusable services for the Exchange Network.

I. Definition of Standard Milestones for EPA Information Systems or Data Exchanges

This section will assist EPA Programs and Exchange Network partners in better understanding the EPA Program Office activities and establish consistency across all data flows by further defining each milestone. These activities may be already completed, in process or planned at the time of release of this guidance.

Test XML Schema - (Version X) - Schema has completed EPA testing and is ready for limited release to Exchange Network Partners that will support the testing process with EPA to identify any potential issues from real data exchanges. This includes the use of real data sets in the XML instances documents. At this stage, Partners will have the constructs for mapping data to their own systems and sufficient time would be needed by these partners to complete that process once the schema(s) is released.

Release final XML Schema – (Version X) - Schema has undergone conformance review and is ready for posting to the Exchange Network Web Site for access by all Exchange Network Partners (www.exchangenetwork.net).

National database available for testing - National database is ready for testing to exchange data in a format that complies with agreed upon standards and rules. For example, the database can support testing the receipt and processing of XML instance documents or a converted format as part of the exchange process.

Availability of EPA Node services for testing - EPA Node services include all central services the program offices need or choose to enable a more efficient data exchange among exchange partners. Examples include XML validation (Schema and Schematron), Network Authentication and Authorization Service (NAAS), XML Gateway services, and the Universal Description and Discovery Integration tool.

Readiness for complete end-to-end testing by Exchange Network Partners - At this stage, the XML schema(s) at a minimum are ready for testing by Network Partners and the National Database and EPA Node services are available for testing. In addition, all EPA accounts have been established for testing (e.g. privileges to NAAS and authorization to the database)

Flow configuration document completed or updated - Flow Configuration Documents identify and standardize the minimum information needed by trading partners to execute a data exchange. They describe the technical configuration and business processes used to exchange data between trading partners.

System ready to receive or publish - This status indicates that a sufficient amount of end-to-end testing has occurred and all problems addressed, the XML schema(s) has been released, supporting documentation has been finalized, all production readiness reviews have been completed, the Program Office has received approval (if applicable) from the National Computing Center for deploying new code to production, and the appropriate parties (e.g. helpdesks) have been notified of release and have the necessary tools to support Exchange Network Partners' inquiries.

Develop Trading Partner Agreement (TPA) - A Trading Partner Agreement (TPA) defines in writing, for specific data exchanges, the participating partners' individual and joint responsibilities in stewardship, security, and other items essential for the effective exchange of information between two or more trading partners on the Exchange Network. A TPA must be developed within six months after the exchange has begun unless a waiver is obtained. The Network Policy Framework including the TPA Procedure can be found at: http://www.exchangenetwork.net/policy/index.htm.

Other Exchange Network activities (optional) - This section provides an opportunity to identify key milestones for unique activities associated with a particular project. Some examples are upcoming National conferences to conduct training, additional Web services to be deployed, a strategic rollout plan and related post-production activities.

II. Regulatory and National System Flows

Applicants could propose to implement one or more of the following data exchanges. These exchanges are organized by media: EPA's priority will be on proposals that focus on deploying regulatory and national system flows. National system flows are indicated below by an asterisk (*). Each of these data exchanges is briefly described below, along with related EPA Program Office information and a concise description of milestones for the development of data flow within the FY 2009-2011 timeframe. *Please note that data exchanges for the Air Facility System (AFS) and the Integrated Compliance Tracing System (ICTS) have been removed from this prioritization list because milestones have been changed to dates beyond the 2011 timeframe.* EPA expects to contact previous recipients to change grant workplans which include spending on the AFS or ICTS data exchanges. In some cases, additional activities for the data exchange are listed. Applicants need to align their activities with the milestones described. Priority will also be given to proposals that result in data being published.

Air Quality System (AQS)

Description:
AQS is a national database that contains ambient air quality monitoring data collected by state, tribal, and local governments. The data volume that flows into AQS is large, with thousands of files submitted per year containing a total of about 90,000,000 discrete data points.

Exchange Network Program Office Activities	
Milestones	**Target Completion Date**
Test XML schema - (Version 2.0)	Completed
Release XML Schema – (Version 2.0)	Completed
Availability of database or system for testing	Available
Availability of Node services for testing	Available
Readiness for complete end-to-end testing by states/tribes*	Ready
System readiness to receive production data to EPA	Ready
Flow Configuration Document completed or updated	Completed

* An AQS test environment account is required for system or end-to-end testing.

Additional Activities to be considered by Grant Applicants:
Grant applicant activities could include mapping data elements to XML schema and configuring the Node/Web Services to flow this dataset to EPA.

Emission Inventory System (EIS)

Description:

The Emissions Inventory System (EIS) is the new information system for storing all current and historical emissions inventory data. It will be used to receive and store emissions data and generate annual and triennial National Emission Inventory beginning with the 2008 NEI.

The National Emissions Inventory (NEI) is EPA's compilation of estimates of air pollutants discharged on an annual basis and their sources. EPA uses the NEI to track emissions trends over time, develop regional pollutant reduction strategies, set and analyze regulations, perform air toxics risk assessments including inhalation risks and multi-pathway exposure, model air pollutant dispersion and deposition, and measure environmental performance as required by the Government Performance and Results Act.

Exchange Network Program Office Activities	
Milestone	**Target Completion Date**
Test XML schema	Complete
Release XML Schema (Draft)	Complete
Availability of database or system for testing	May 2009
Availability of Node services for testing	Complete
Readiness for complete end-to-end testing by States/ Tribes	July 2009
System readiness to receive production data to EPA	July 2009
Flow configuration document completed or updated	July 2009

Additional Activities to be considered by Grant Applicants:
Future reporting is expected to transition to the modernized NEI —the Emissions Inventory System (EIS). For FY2008, EIS development is primarily focused on Web access to the database. Data submissions are expected to start flowing through the Exchange Network to the EIS in 2009. The EISys reporting will make use of a new schema that is expected to shorten the length of time required to meet reporting deadlines and reduces burden on state, local and tribal agencies by consolidating reporting schemas — referred to as the Consolidated Emission Reporting schema (CERS). The CERS facilitates the reporting of data from state-to-EPA for the NEI and The Climate Registry (TCR) reporting. The schema may also be used for direct facility to state reporting as additional data elements, identified in the Air Force project, have been included for this purpose.

Integrated Compliance Information System
National Pollutant Discharge Elimination System (ICIS-NPDES)
June 16, 2008

Description:
ICIS-NPDES is the modernized version of the Permit Compliance System (PCS). It supports traditional NPDES wastewater discharge program functions (e.g., permitting, compliance monitoring, and enforcement), as well as new functions for special regulatory programs, such as concentrated animal feeding operations (CAFO). ICIS-NPDES will allow for data exchanges using XML via the Exchange Network and provide links to other EPA databases (e.g., FRS). The ICIS-NPDES exchange will be completed with the "batch" implementation of the system. The "batch" implementation is for states and facilities to electronically transfer (batch) some or all of their data into ICIS-NPDES using CDX.

The ICIS-NPDES batch implementation will be done in 3 parts:

- **Part 1**: Batch DMR for Hybrid States. *Hybrid states* will electronically transfer (batch) DMR data from a state system to ICIS–NPDES and will enter all of the non-DMR NPDES data into ICIS–NPDES via the ICIS web screens. Most hybrid states are expected to use ICIS-NPDES to directly manage their NPDES program. There are 7 to 9 hybrid states. (Hybrid states are those states that will electronically transfer (batch) DMR data from a state system to ICIS–NPDES and will enter all of the non-DMR NPDES data into ICIS–NPDES via the ICIS web screens. Most hybrid states are expected to use ICIS-NPDES to directly manage their NPDES permitting and enforcement program.)

- **Part 2**: NetDMR. Development is ongoing for ICIS-NPDES (via CDX) to receive DMR's from facilities that have electronically signed and submitted them using NetDMR. The NetDMR tool is being developed pursuant to an Exchange Network grant managed by Texas with the participation of 11 others states, OEI and OECA. (The XML DMR schema components developed in Part 1: Batch DMR for Hybrid States will also be used in the NetDMR flow.)

- **Part 3:** Full batch states. Full Batch states have their own systems to manage the NPDES program and will electronically transfer (batch) all of their NPDES data from their state systems via CDX to ICIS–NPDES. This will include the previously developed DMR data as well as all other data families in the ICIS-NPDES schema. There are approximately 22 full batch states. (The XML DMR schema components developed in Part 1: Batch DMR for Hybrid States will also be used in full batch schema.)

Exchange Network Program Office Activities	
Milestone	**Target Completion Date**
Test (Instance or Examples) ICIS-NPDES XML Schema for **Part 1**: Batch Discharge Monitoring Report (DMR) for Hybrid states.	Completed
XML Schema Final Conformance Review for **Part 1**: Batch DMR for Hybrid states. (The XML DMR schema components developed in Part 1: Batch DMR for Hybrid States will also be used in Part 2: NetDMR and Part 3: Full batch states.)	Completed
Release ICIS-NPDES XML Schema for **Part 1**: Batch DMR for Hybrid states.	Completed
Flow Configuration Document for **Part 1**: Batch DMR for Hybrid states.	Completed
Availability of database or system for testing for **Part 1**: Batch DMR for Hybrid states (receipt of DMR's into ICIS).	Available
Availability of Node services for testing for **Part 1**: Batch DMR for Hybrid state flows.	Available
Readiness for complete end-to-end testing for **Part 1**: Batch DMR for Hybrid state flows.*	Ready
System readiness to receive production data for **Part 1**: Batch DMR for Hybrid states.*	Ready
Part 2: NetDMR Flow activities.	
Readiness for complete end-to-end testing by facilities for the NetDMR Flow to EPA.	Ready
XML schema for NetDMR is final	Completed
NetDMR **State**-hosted by Texas instance pilot facility demonstration completed and application approved for production.	8/31/08
NetDMR operational for facilities where EPA is permitting authority (Federal Instance). Readiness to receive production facility data for the NetDMR Flow from EPA permitted facilities.	3/31/09
Part 3: Full batch states.	To Be Determined upon completion of the ICIS Alternative Analysis in September 2008.

* Contingent on partners completing data clean-up and data migration from PCS to ICIS-NPDES.

Activities to be considered by Grant Applicants

ICIS-NPDES Grant Applicants should consider the following steps prior to data submissions to EPA.

- Continue ICIS-NPDES data migration activities in coordination with EPA Headquarters, Regions, states, and Data Migration Workgroup participants.
- Participate on Integrated Project Teams (IPTs), monitor progress, and test the submission process with EPA.
- Participate in testing processes (e.g., Node-to-Node communication with CDX) for submissions to EPA, which require an extensive amount of state involvement and commitment.
- Develop capability to generate final XML schema for ICIS-NPDES data flow.
- Extract and convert the data from state NPDES systems into the XML format needed to submit data to ICIS-NPDES.
- Modify state systems to accommodate the new/revised data requirements for ICIS-NPDES.
- Implement Node-to-Node communication with CDX.
- Develop requirements and design for extraction tool to pull data out of ICIS-NPDES via the Network and import to state database. Develop and implement extraction tool.

Network Electronic Discharge Monitoring Reports (NetDMR)

Description:
Electronic transmission of DMR's allows NPDES permitting authorities to get out of the business of printing and mailing hard copy paper DMR forms to thousands of facilities, sorting the paper forms received, key punching results by hand, and then filing the paper forms. NetDMR is an ongoing collaboration of more than 10 states to build a common, centrally-hosted E-DMR application closely integrated with ICIS-NPDES. Many states will use NetDMR on an EPA-maintained, centrally-hosted system, but NetDMR's open source configuration also allows use of shared code hosted on a state system.

Version 1 of the NetDMR application is being developed collaboratively among a group of states (led by Texas), OECA and OEI. Within the ICIS-NPDES project, NetDMR is referred to as ICIS-NPDES Batch Release Part 2. Version 1 of the NetDMR application has been funded. Other suggested activities include: 1) Pilot testing and launching the NetDMR system within an authorized state via EPA's centrally-hosted system; 2) adaptation of NetDMR to work in a state environment (state hosting), and 3) enhancements to NetDMR – proposed additional functionality that was not designed into Version 1.

Exchange Network Program Office Activities	
Milestone	**Target Completion Date**
Readiness for complete end-to-end testing by facilities for the NetDMR Flow to EPA.	2/29/08
XML schema for NetDMR is final	3/31/08
NetDMR centrally-hosted instance pilot facility demonstration completed and application approved for production.	8/31/08
NetDMR centrally-hosted instance ready for testing with authorized states slated for Group I, II, or II production.	11/15/08
NetDMR operational for facilities where EPA is permitting authority. Readiness to receive production facility data for the NetDMR Flow from EPA permitted facilities.	12/31/08
NetDMR centrally-hosted instance ready for Group I authorized states to move into production.	3/31/09
NetDMR centrally-hosted instance ready for Group II authorized states to move into production.	6/30/09
NetDMR centrally-hosted instance ready for Group III authorized states to move into production.	9/30/09

Activities to be considered by the Grant Applicants
The 2008 Exchange Network grant process could support collaborative efforts to implement the NetDMR tool (Area 1), as well as efforts by other states to flow DMR data from the permittee to ICIS-NPDES via a state-hosted NetDMR system (Area 2). Area 3 discusses adding enhancements that were dropped from the original design due to cost considerations.

Area 1 – Pilot Testing and Launch of NetDMR system and associated business processes.

Effective implementation includes development of all the business processes to move from a paper based system to an electronic based system, with the understanding that a paper based system will need to be maintained for several years until all permittees are converted to the electronic system. Applications could describe the efforts needed by the state to implement NetDMR effectively, and might discuss what adoption rate goals and milestones are targeted by the state. Applications could also assist pilot states in converting from paper to electronic processes, ensuring that user agreements are properly handled according to CROMERR requirements, and ensuring that permit limits are up to date in ICIS-NPDES. Applicants could discuss and identify the outreach, training, and support assistance activities and could identify which of the three Groups (dates in table above) that the state chose for implementation of the NetDMR tool.

Area 2 – Adaptation of NetDMR to a State Environment

Some states have specific business reasons why NetDMR will be used as a stand-alone state program (as opposed to use of the centrally-hosted version). Applications might explain why it is advantageous to deploy a stand-alone system. Applicants could discuss costs and milestones associated with deploying and testing the application to ensure it works properly and sends required data to ICIS-NPDES.

Area 3 – Enhancements to NetDMR

Several suggested requirements did not make it into the original NetDMR project design due to cost considerations. Applicants (individual partners or a consortium of partners) can discuss possible enhancements, along with the costs that will be required for these changes to occur.

Under Areas 1 and 2, the grantee could indicate whether the state plans to require mandatory use of electronic submission of DMR's for permits that are renewed after the NetDMR project is completed. A state's participation in either Area 1 or 2 is contingent upon its completion of data clean up and migration from PCS to ICIS-NPDES.

Resource Conservation and Recovery Act Information (RCRAInfo)

Description:
RCRAInfo is a national, Web-based system which provides data entry, data management, and data reporting functions used to support the implementation and oversight of the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984 as administered by EPA (through its Regions) and authorized States. RCRAInfo identifies and categorizes hazardous waste handlers, and includes information about regulated activities, permit/closure status, compliance with Federal and State regulations, and cleanup activities.

Exchange Network Program Office Activities	
Milestone	**Target Completion Date**
System Readiness to receive production Handler data to EPA (Version 3.0)	Ready
System Readiness to receive production CME data to EPA (Version 3.0)	Ready
Flow configuration document completed or updated (Version 3.0)	Completed
Test XML schema – Permitting, e-Permit, Financial Assurance module, additional GIS data, and Corrective Action (Version 4.0)	8/01/2008
Release XML Schema – Permitting, e-Permit, Financial Assurance module, additional GIS data, and Corrective Action (Version 4.0)	10/01/2008
Readiness for complete end-to-end testing by States/ Tribes (Version 4.0)	11/01/2008
System readiness to receive production data to EPA (Version 4.0)	12/15/2008
Flow configuration document completed or updated (Version 4.0)	12/31/2008

Additional Activities to be considered by Grant Applicants::
The readiness of Version 4.0 of Permitting, e-Permit, Financial Assurance module, additional GIS data, and Corrective Action is noted in the table for informational purposes only. States are also encouraged to apply for flows for Compliance Monitoring and Enforcement (CME) Module which will only change slightly with Version 4. (Please note: Version 4 will be the only method for translating data to RCRAInfo. Version 1, 2, and 3 flows will no longer be accepted.) EPA encourages recipients to continue to participate on IPTs, monitor progress, and work closely with EPA to test the submission process. The testing process for submissions is a critical stage that requires an extensive amount of state involvement and commitment in partnership with EPA to work through issues that can only be recognized through ‘real’ data submissions.

Assessment TMDL Tracking & ImplementatioN System (ATTAINS)

Description:
EPA maintains ATTAINS to document assessment decisions reported for Clean Water Act § 305(b) and §303(d), and to track the progress of established Total Maximum Daily Loads (TMDL's) and implementation actions to restore impaired waters. This information is critical to measuring environmental outcomes under the EPA Strategic Plan and the Office of Water National Water Program Guidance. ATTAINS is the merger of the Assessment Database with the National TMDL Tracking System.

Exchange Network Program Office Activities	
Milestone	**Target Completion Date**
Test XML Schema - (Version 1.0)	Complete
Flow configuration document completed or updated	Complete
Release XML Schema – (Version 1.0)	Complete
Availability of database or system for testing	Pending
Availability of Node services for testing	Pending
Readiness for complete end-to-end testing by States	Pending
System readiness to receive production data to EPA	Pending
Post materials to exchange network web site	10/01/2008
Launch IPT to evaluate system data flow	10/01/2008
Evaluate IPT feedback	10/01/2009
Develop Draft XML Schema – (Version 2.0)	02/01/2010
Test XML Schema – (Version 2.0)	06/01/2010
Release XML Schema – (Version 2.0)	08/01/2010
Flow Configuration document updated	08/01/2010
Readiness for complete end-to-end testing (Version 2.0)	11/01/2010
System readiness to receive production data to EPA (Version 2.0)	02/01/2011

Additional Activities to be considered by Grant Applicants:

- Participate in the effort to further validate version 1.0 of the schema and data flow.
- Implement available tools for translating information to the schema.
- Incorporate existing IR and National Hydrography Database georeferencing XML Schema into Web-based services and applications.
- Participate in the IPT for evaluating version 1.0, and designing version 2.0 which would include the incorporation of TMDL information (approved TMDL document, Waste Load Allocations, Margins of Safety, relevant Permit information, etc.) as well as information relevant to the tracking of the implementation of a TMDL.
- Identify innovative ways for sharing geospatial information related to IR data.

eBeaches

Description:

eBeaches is the electronic data transmission system that allows EPA to securely receive and display state beach water quality and swimming advisory data as soon as state and local agencies send the data. eBeaches supports the Beaches Environmental Assessment and Coastal Health (BEACH) Act requirement to collect, store, and display beach public right-to-know pollution occurrence data.

Exchange Network Program Office Activities – PRAWN	
Milestones	**Target Completion Date**
Test notification XML schema - (Version 2.0)	Completed
Release notification XML Schema – (Version 2.0)	Completed
Availability of database or system for testing	Available
Availability of Node services for testing	Available
Readiness for complete end-to-end testing by states/tribes	Ready
System readiness to receive production data to EPA	Ready
Flow Configuration Document completed or updated	Completed

Exchange Network Program Office Activities – Beach WQX	
Milestones	**Target Completion Date**
Test Beach Access DB use of WQX XML schema (V2.0)	Completed
Release Beach Access DB use of WQX XML Schema (V2.0)	Completed
Availability of database or system for testing	Available
Availability of Node services for testing	Available
Readiness for complete end-to-end testing by states/tribes	Ready
System readiness to receive production data to EPA	Ready
Flow Configuration Document completed or updated	Completed

Activities and Suggestions to be considered by Grant Applicants

Applicants should consider the following steps prior to data submissions.

- Read all support documentation. http://www.epa.gov/waterscience/beaches/grants/datausers/index.htm
- Map systems to the approved national XML schemas.
- Quality check organization name (org_id) to sample station (station_id) to beach name (project _id aka beach_id and national project id (EPABEACH) relationship/links to ensure correct stations are linked to corresponding beach.
- Check with other internal state offices for existing Node capability and before developing Node capability for each beach data flow.
- Validate XML instance documents prior to submission via CDX or Node.
- Participate in biweekly Beach conference calls.

Safe Drinking Water Information System (SDWIS)

Description:
The Safe Drinking Water Information System (SDWIS) receives and stores basic inventory and regulatory compliance data for all public drinking water systems in the country. Data flows using XML from state primacy agencies to EPA.

Exchange Network Program Office Activities	
Milestone	**Target Completion Date**
Test XML schema - (Version 2.0)	Completed
Release XML Schema – (Version 2.0)	Completed
Availability of database or system for testing	Available
Availability of Node services for testing	Pending
Readiness for complete end-to-end testing by States/ Tribes	Pending
System readiness to receive production data to EPA	Ready
Flow configuration document completed or updated	Completed
Laboratory to State reporting using XML schema	12/30/2006

Additional Activities to be considered by Grant Applicants:
EPA has built a laboratory reporting tool to allow laboratories to report sample results electronically to state primacy agencies.

EPA is developing an electronic verification tool for expected deployment in 2009 to enable EPA and states to check the completeness (a major component of data quality) of the data submitted to SDWIS/FED Operational Data Store in comparison to results reported by public water systems and their laboratories. To support EPA's use of this tool, as well as for future 6-year reviews, states may target EN grant applications to node-to-node exchanges of parametric data submissions to EPA.

Underground Injection Control (UIC) Information System

Description: EPA launched a new UIC national information system in December 2007 and immediately began accepting data through EPA's exchange network. Five states and seven Regions are now submitting data quarterly, with 25 other UIC programs developing the capability. The objective of the new information system is to have high quality, consistent program information from over 70 existing state and EPA Direct Implementation (DI) databases. The data fields are at well level, with fields for UIC inventory (linked to FRS), permits, geospatial coordinates, inspections, compliance with mechanical integrity, violations, and enforcement actions. Once fully implemented in a state, existing reporting will be eliminated, replaced by submission of the data to EPA's database.

Milestone	**Target Completion Date**
Test XML schema - (Version 1.0)	Completed
Release final XML Schema – (Version 1.0)	Completed
National database available for testing	Available
Availability of Node services for testing	Available
Readiness for complete end-to-end testing by states/tribes	Ready
Flow configuration document completed	Completed
System ready to receive production data from states	Ready
Other: UIC Data Mapping Instructions	Completed
Other: Mapping and conversion of state data consistent with mapping instructions from non standard/non existent state UIC databases (particularly for Class V) underway (until all states fully populate and update UIC database)	On-going
Other: Pre-submission validation of data by State/DI using schema parser and Schematron business rules before populated XML schema is transmitted through CDX.	**On-going**

Additional Activities to be considered by Grant Applicants:

- Participate in an IPT, develop XML document, complete pre-submission validation before submission to CDX.
- For Class V state programs with no database, consider working with EPA to adapt EPA's data model and definitions for core set of data in state database. EPA has tools to assist in database development,
- Participate with EPA in QA/QC activities to ensure data is high quality, consistent, and complete.

Water Quality Exchange

Description:
WQX defines the framework by which EPA compiles water quality monitoring data (physical, chemical and biological) that are collected by a number of entities via a shared schema. The purpose of the compilation of data in the STORET Data Warehouse is to provide a seamless collection of monitoring data that is not restricted by jurisdictional boundaries. For more information about WQX, visit http://www.epa.gov/storet/wqx.html or http://www.exchangenetwork.net/exchanges/water/wqx.htm.

Exchange Network Program Office Activities	
Milestone	**Target Completion Date**
System readiness to receive test and production data to EPA (WQX v1.0)	Completed
Availability of Node services for testing (WQX v1.0)	Pending
Pilot and test Biological/Habitat Schema (WQX v2.0)	Completed
Release Biological/Habitat Schema (WQX v2.0)	Completed
Availability of database and system for testing (Biological/Habitat)	Available
Availability of Node services for testing (Biological/Habitat)	Available
Readiness for complete end-to-end testing by States/ Tribes (Biological/Habitat)	Ready
System readiness to receive production data to EPA (Biological/Habitat)	7/14/2008
Flow configuration document updated	Completed
WQX XML Generation Tool in production	9/30/2008
STORET Warehouse Monitoring Location and Results Web Services	Completed
Monitoring Location NHD Indexing Services	Early 2009

Additional Activities to be considered by Grant Applicants

- Utilize WQX v2.0 to flow water quality data
- Develop applications that use EPA STORET Warehouse Web Services for data analysis
- Adopt all applicable data standards
- Identify innovative ways for sharing continuous monitoring data
- Encourage the development of common catalogue services that provide standard water quality data discovery and publishing to the Exchange Network community
- Build tools that integrate water quality data from various sources to present a common view of water quality data
- Encourage capacity with small data providers for participating with other data partners and submitting data through WQX
- Develop shareable translation and validation tools to facilitate water quality and biological data exchange.
- Begin linking station locations consistent with the NHD and the Geospatial One Stop Hydrography Standard.
- Identify collaborative and innovative approaches for transitioning from local STORET to WQX.

Facility Registry System (FRS)

Description:
The Facility Registry System (FRS) is a centrally managed database that provides access to a single source of comprehensive information on facilities subject to environmental regulations or of particular environmental interest. This integrated facility record allows the EPA and the public to gain access to all environmental information reported from and about specific facilities. New Schema will be available in CY 2008, which will add new Tribal data elements and more latitude and longitude data to the Schema.

Exchange Network Program Office Activities	
Milestones	**Target Completion Date**
Test XML schema – NEW FAC ID Version 3.0 replacing Fac ID 2.3	Completed
Release XML Schema – NEW FAC ID Version 3.0	12/31/2008
Availability of database or system for testing	Available
Availability of Node services for testing	Available
Readiness for complete end-to-end testing by states/tribes	Ready
System readiness to receive production data to EPA	Ready
Flow configuration document completed or updated	Completed

Additional Activities to be considered by Grant Applicants:
States are encouraged to exchange facility data with EPA's FRS that are: Tier 2 Chemical Inventory Reporting facilities, CAFOs (Concentrated Animal Feed Operations), Underground Storage Tanks, Leaking Underground Storage Tanks, Landfills, Spill Prevention Control and Counter Measure facilities and other facility types of environmental interest.
.
IPT involvement is encouraged to assist in building out Web Services to help publish facility identification data through out the Exchange Network. Defining, vetting and building a comprehensive standard set of Web Services for facility data would advance the Network and serve as a model for other data service publishing.

States and tribes are encouraged to submit geo-spatial locational data (latitude and longitude data) to EPA's FRS for partners interested in locating and mapping facility data. Applicants are encouraged to improve their facility records to conform more closely to the contact, facility and locational data standards, thus improving the values of facility records. Tribes are especially encouraged to use the Fac ID schema to share data about Open Dumps on Indian Country. (See Open Dump Section of Appendix B)

Toxic Release Inventory System (TRIS)

Description:

The TRI State Data Exchange provides for simultaneous submission of TRI reports to both EPA and states via CDX. Benefits of the TRI State Data Exchange include:

- For participating states and EPA, elimination of duplicative data entry, reduction of state data reconciliation, and faster access to the data.
- For facilities, reduced burden through simultaneous submission to both EPA and the state.

Exchange Network Program Office Activities	
Milestones	**Target Completion Date**
Define/Modify State/EPA Data Requirements	Ongoing
Modify XML Schema (if necessary)	10/31/2008
Continue to investigate use of additional Web services for further application functionality	Ongoing
Test and Support operational Node-to-Node data exchanges	Ongoing

Additional Activities to be considered by Grant Applicants:

- Work with the TRI Program to test XML data exchange from EPA to state Nodes.
- States should develop procedures that enable the import of TRI data into their systems. The procedures should support data received via their state.
- Use the TRI XML schema and develop loading/converter tools to populate the state database directly from incoming data sources via CDX.
- Consider leveraging existing applications and tools developed by states already on the TRI State Data Exchange. Consider collaborating with states on the TRI State Data Exchange and other states interested in joining by developing sharable code, etc.

III. Non-Regulatory Data Exchanges

This section of Appendix B highlights non-regulatory data exchanges that meet specific business needs. These data exchanges could support environmental decision-making and operations, address cross-cutting environmental issues, or support specific state, territorial, or tribal environmental programs.

Applicants could propose to implement geospatial data and tools to flow environmental information. Exchange Network partners could play an important role in helping the geospatial community at large realize the benefits of building interoperable solutions to share and re-use data. By adhering to applicable geospatial standards and measurement guidelines for metadata creation and publishing, and by implementing Open Geospatial Consortium (OGC) compliant Web service capabilities, Network partners can take important steps to ensure the development and maintenance of shareable geospatial data resources. To avoid duplicative data acquisitions, applicants can utilize the existing cataloged information available in the Geospatial One Stop (GOS) portal (http://www.geodata.gov) prior to buying, creating or collecting geospatial data needed for proposed projects. Once projects are underway, partners can create metadata about geospatial datasets acquired and publish their existence through registration at the GOS portal.

Non-regulatory

Enabling Geospatial Data Exchange

Description:
Office of Management and Budget (OMB) Circular No. A-16 (revised August 19, 2002) identifies 34 critical geospatial data coverages (referred to as "themes") that are essential to the National Spatial Data Infrastructure. Geospatial data are information that represents features on the earth expressed as lines, points or polygons and are used by geospatial information systems to support analysis in a geospatial context. The A-16 geospatial data coverages include environmental datasets on biodiversity, wetlands, watershed boundaries, soils, hydrography, etc.) essential to environmental analysis and decision-making across government.

Exchange Network Program Office Activities	
Milestones	**Target Completion Date**
Evaluate existing standards and schema (XML/GML) to support coverages	02/01/2009
Develop XML/GML schema and concept of operations for discovery, update or exchange of coverages	06/01/2009
Release XML Schema	08/30/2009
Conduct/complete testing	02/01/2010
Complete readiness evaluation for implementation	05/01/2010
Readiness for complete end-to-end testing by states/tribes	08/01/2010
System readiness to implement geospatial data production discovery/exchange	12/01/2010

Additional Activities to be considered by Grant Applicants:
The intent is not to fund the creation of new data (e.g. conducting water sampling) or exchange entire national coverage, but to facilitate the sharing of important updates to these coverages by state or local agencies across the Network partnership, where practical, as well as to facilitate the publishing of Network data and services using Open Geospatial Consortium (OGC) standards and interfaces.

Proposals relevant to this topic should be centered on one or more key business areas that would benefit from the publishing of geospatially-enabled Network data both inside and outside the Network itself. Innovative applications will demonstrate publishing of geospatial data assets for use in applications involving multiple jurisdictions and/or will focus on multi-media environmental problems, such as using Geospatial Really Simple Stuff (GeoRSS) to integrate bio-diversity, habitat, bio-indicators, and invasive species with existing water data. Examples of relevant proposals could include the exploration of potential effects of climate change on ecological resources like T&E species or vulnerable ecosystems. In these examples, the value of geospatially enabling Network data flows is apparent to facilitate the study of cross-jurisdictional problems with data sources from inside and outside the Exchange Network itself, using geographic location as an integrating concept. Applicants are encouraged to demonstrate how their work fosters collaboration across a broader community of interest (e.g., USGS, State Cartographic Agencies, etc.) and supports the establishment and broad distribution of these data. Applicants proposing the development of geospatial exchanges should leverage OGC standards, tools and services to adapt XML/GML schema to support the discovery, exchange and update of these critical data sources.

National Pollution Prevention (P2) Results Data System

Description:
The National P2 Results Data System is a cooperative initiative between EPA, state and local P2 programs, the National Pollution Prevention Roundtable (NPPR), and the Pollution Prevention Resource Exchange (P2Rx) Centers, to present the results of P2 programs on both a regional and national basis using common metrics and definitions. The initial System, including regional aggregation modules and training and promotional materials, has been developed and deployed. Three state-level databases and an XML schema for P2 Results Data exchange are being developed to facilitate the collection and aggregation of P2 outcome data.

Exchange Network Program Office Activities	
Milestone	**Target Completion Date**
Establish an Exchange Network Node meeting data standards for P2 data exchanges	8/31/2008
Document Region 10 data aggregation tool to inform development of XML schema for P2 results data exchanges	completed
Develop national P2 results database and XML schema to transfer data from state databases to regional aggregation modules and the national database	completed; schema under review
Test data exchanges between state databases, regional aggregation modules, national P2 results database, and Exchange Network	8/31/2008

Additional Activities to be considered by Grant Applicants:
- Contribute to further elaboration of the P2 Results System's data dictionary; including coordination with metrics used by Performance Track, Compliance Assistance, the P2 Grants program, and other related programs. Expand P2 measurement capacity within the system to include Green House Gas Reduction, Mercury and Sustainability metrics.
- The new schema for this data flow will be in production in the fall of 2008. Grant applicant activities could include mapping additional data elements to XML schema and configuring the Node/Web Services to flow this dataset to the National P2 Results Node, EPA, and other partners.
- Encourage the development of Exchange Network capabilities with additional states for this data flow including database/node installation support, and training and mentoring opportunities.
- Contribute to further development of data collection policies (e.g., required documentation of results; how to handle recurring results).
- Contribute to further development of data quality and assurance procedures to improve completeness and integrity of the data; and
- Develop and share tools to assist data collection in the field

Agricultural Non-Point Source Best Management Practice Data Exchange (NPS BMP)

Description:
Accurate, consistent and spatially explicit non-point source best management practice data is a critical data flow that assists in the assessment of load reduction and corresponding water quality benefits. BMP data aids the strategic targeting of actions required to protect and restore the water quality conditions necessary to sustain a number of aquatic species.

The Regional partnership, led by Pennsylvania Department of Environmental Protection, has developed the data exchange templates, draft schema and services that standardizes the exchange. On a national scale, NPS BMP will provide a database of information on best management practices suitable to reduce loads and improve water quality in different geographic settings.

Exchange Network Program Office Activities	
Milestone	**Target Completion Date**
Flow configuration document completed	Complete
Test XML schema	August 31, 2007
Release final schema	September 30, 2007
Develop standard data exchange schema	Draft – In EPA review
System ready to receive or publish	September 30, 2007

Additional Activities to be considered by the Grant Applicants:
Applicants are encouraged to do any of the following activities:
- Expand the current Regional exchange by leveraging the existing schema and standards.
- Develop the suite of services to support geographically and temporally-based exchanges of BMP data.
- Build out the schema to include geo-spatial data exchange elements and develop additional validation and/or analytical tools to support this data flow.

IV. Innovative Data Exchanges

This section of Appendix B highlights examples of Network-wide innovation projects that would expand the Exchange Network's capability to meet emerging business needs and promote reusability. Innovation will be the primary growth mechanism that contributes to the Exchange Network success over the long term. This section describes programs and activities where partners can design, develop and manage flows that will leverage the value of the Exchange Network and expand its use.

Projects and proposals should identify specific activities that meet a business need and involve the sharing of data among partners that are currently on or expected to be part of the Exchange Network. Innovative projects or proposals may or may not involve data flowing to EPA. Acceptable activities for proposed innovative projects include the following:

- publication of data which EPA, states or tribes might want to access from a partner’s Node;
- design and development of a key data flow not yet mature enough to be operational on the Exchange Network;
- development of the data standards for a specific data or document flow; and
- development and documentation of an XML schema.

This section of the Appendix provides detailed information on the following examples of data flows that would be considered innovative in the use of the Exchange Network infrastructure:

Innovative Data Exchanges

An example of another potential innovative project could be to partner with EPA and/or states/tribes to develop data standards and data schemas that would support data flows related to underground storage tank (UST) facilities including, but not limited to, data related to: inventories, releases (leaking), inspections and compliance. UST data flows or data publishing could support web applications and/or integration efforts that would benefit from underground tank facility and program information. Other innovative projects include, but are not limited to, projects related to emergency response and water quality laboratory data reporting.

Climate Change Registry /Green House Gases

Description:
Many States and tribes are interested in and voluntarily participating in Climate Change Registries to promote and standardize best practices in greenhouse gas emission reporting. States and tribes are encouraged to consider leveraging the infrastructure that supports the National Environmental Information Exchange Network in participating with these Climate Registries. The development of data flow schemas, security protocols, registration, data flow documentation, and other applicable activities that support the data exchange of GHG are eligible for grant funding. The Exchange Network is well positioned to play a key part in the timely and accurate exchange of GHG data from the industrial community to State, tribe agencies. States and tribes are encouraged to leverage the EN infrastructure to support this data flow.

Milestones:

- XML schema – GHG /Climate Registry version
- Flow Configuration document on the XML GHG Schema
- Availability of testing the schema
- Availability of Node services for testing
- Readiness for complete end-to-end testing by states/tribes
- System readiness to receive production data

Additional Activities to be considered by Grant Applicants:
Integrated Project Team involvement is encouraged to assist in building out data standards, schema, flow configuration documentation, security protocols, registration procedures, and data flow management, to name a few. Defining, vetting and building a comprehensive standard set of Web Services for GHG data would advance the Network and serve as a model for other data service publishing.

Other potential activities would be to develop the implementation procedures to publish or consume GHG data through Web services or to address validation and exchange of credits for cap and trade programs.

Electronic Document (eDoc)

Description:
The compliance, permit and regulatory development programs depend heavily upon two types of information: facility data and contextual documents. The facility data is reported to national databases (e.g., AFS, RCRAInfo, etc.). Documents are either submitted by the regulated community or issued by the agencies. The documents are either stored in records centers or available on limited agency Web sites.

Agencies need a more efficient manner for providing ready access to these documents. The public, environmental advocates and the regulated communities also benefit in having more access to documents that are linked to facility data. Therefore, all stakeholders will benefit from Web services which provide easy access to critical documents that are linked to the facility compliance/enforcement/permit data.

A successful project would develop Electronic Facility Document Access and Exchange processes capable of: (a) sharing, receiving, storing, and retrieving either actual documents or Web site URL addresses where state/local, EPA partners maintain these documents and (b) facilitating the linkage of these documents via Web services (e.g., EnviroFacts, OTIS/ECHO, etc) at both facilities and document types. The Web services and data flow agreements will allow for periodic updating of the documents/URL linkages to maintain accuracy, security and access to current versions of the documents.

The type of documents is open for the purpose of this proposal. Examples may include:

- Facility Permits: Fact Sheets, Draft Permits, Final Permits (e.g., CAA Title V permits; RCRA Subpart C; CWA-Minors)
- Facility Monitoring/Reporting Documents: Compliance Certifications, Monitoring Reports, etc
  - (e.g., CWA pretreatment reports; CWA biosolids reports; OPA/SPCC spill reports; Section 404 Wetlands reports; RCRA: exception report; exports; transporters; TSDFs: groundwater monitoring report; Air emission from process vents; CAA: Title V compliance certifications; monitoring reports; CEM excess emission reports; compliance reports for MACT, NSPS, etc.
- Enforcement documents: enforcement actions/consent decrees; notices of violation; etc.
- Inspection reports (limited access to internal agency sharing)

Types of Network development activities that proposals should address include:

- Identify current availability of electronic access to key documents
- Develop, test XML Schema and document(s) “metadata” standards
- Availability of Web services or system for testing
- Readiness for complete end-to-end testing

Flow configuration document completed or updated

Open Dump Data Exchange

Description:
The Open Dump problem facing tribes is immense and badly in need of inventorying the universe of the problem. The EPA's Office of Solid Waste and the DOI-Indian Health Service all have a need to up dated and timely information on Open Dumps on Indian Country. The Exchange Network is in a unique position to assist and promote the timely, accurate sharing of key information on Open Dumps to a vast set of partners. This is a data set that has even OMB's attention. Development of specific data standards might be needed. Development or enhancement of the Fac ID 3.0 schema might fit the data exchange needs of this data flow. However, a new schema might be necessary for the data flow. Tribes are encouraged to develop the data requirements that will meet OSW and HIS data needs and develop the appropriate schema and flow configuration to meet these data needs.

Milestones:
- Develop XML schema – Open Dumps
- Test Schema
- Develop Web services
- Complete end to end testing by tribes with CDX
- Flow configuration document completed
- Conduct an IPT on the data flow
- Mentor other tribes on the data flow

Additional Activities to be considered by Grant Applicants:
Integrated Project Team involvement is encouraged to assist in building out the schema for Open Dumps. Defining, vetting and building a comprehensive standard set of Web Services for Open Dump data flow would advance the Network and serve as a model for other data service publishing. Documenting the data flow is needed.

Appendix C

Activities Related to the Mentoring, Planning and Training Group

The Mentoring, Planning and Training group activities support the further development of the Exchange Network through collaborative efforts. Applicants are encouraged to combine the suggested activities from the Mentoring, Planning and Training group with those of the Infrastructure group and the Data Exchange and Integration group to facilitate, as appropriate, the development of integrated proposals. Examples of the types of activities in the Mentoring, Planning and Training group are discussed below. Applicants may also suggest other related activities that support the expansion of the Exchange Network through collaborative efforts. Also, attached is a list of final data standards and standards that are currently under development by the Environmental Data Standard Council Action Teams.

Mentoring Activities
The mentoring subgroup focuses on providing assistance to potential Exchange Network partners, new Exchange Network partners, and/or partners that need a specific expertise that applicants can provide. An applicant that includes mentoring activities in a proposal should describe the type and level of expertise that can be provided and the targeted recipients of such mentoring. For example, applicants can:

- Sponsor meetings with new partners or existing partners that support greater and enhanced use of the Exchange Network.

- Assist other state, tribal or territorial agencies that have not participated in the Exchange Network. This may include providing specific one-on-one assistance to potential new partners and sharing of documentation and experience.

- Facilitate the connection of major metropolitan statistical areas to Exchange Network information through partnerships. These activities should focus on areas where significant environmental, health, and natural resources exist, and that the Exchange Network would benefit from their participation in the Network.

Planning Activities
The planning subgroup focuses on meetings and activities that help to formulate plans that would foster cooperation among the Exchange Network partners and result in improved collaboration, cooperation, and integration across the environmental programs within and between the states, tribes, or territories. For example, applicants can:

- Convene a community of interest and formulate a plan for collaborative work. (See Appendix A for definition.) The community of interest can, for example, define the data area (scope), linkages to other data areas, an inventory of current Network projects, and a list of major information gaps. Applicants, through the community of interest, would develop a plan, a list of opportunities for collaboration, Network services that support the community of interest, and a list of relevant partners.

- Identify and propose to the Exchange Network Leadership Council the need for a new data standard or the revision of existing data standard for use by Exchange Network partners. Applicants may serve on a data standards action team (as subject matter expert) that develops or modifies a data standard and develops XML shared schema components. For more information on final data standards and standards that are under development, please see the end of this Appendix.

- Plan and participate in a multi-partner collaboration to develop solutions that can be shared with Exchange Network partners for CROMERR compliance. Applicants would be responsible for establishing a multi-partner team to collaborate on CROMERR compliance for electronic reporting.

Training Activities
The training subgroup focuses on activities related to the development and provisions of training on the Exchange Network. Applicants are encouraged to work with associations that represent the interests of EPA's co-regulators and co-implementers to identify training needs specific to the Exchange Network. Applicants are also encouraged to discuss in their proposals whether they intend to develop a group similar to an Integrated Project Team (IPT) for training development, how the training will be made available to Network Partners, and how the training can be used across the Network (i.e., the applicability of the training to all relevant partners). Suggested topics for consideration include, but are not limited to:

- An Exchange Network beginner training course that would provide an introduction for new participants on the Network. This training would address the fundamentals of the Exchange Network, including how to establish a Node, use of XML to exchange data, use of data standards, and developing trading partner agreements.

- Maximizing the use of the Exchange Network after a Network Node is established. This training could be used to provide information on the available data standards, XML schema, data exchange development, and the status of Nodes on the Network.

- Methods and approaches for modernizing data collection, analysis and availability for the Exchange Network partners, aligning and integrating Exchange Network efforts within a state, tribe, or territory; and identifying and defining business needs that can be served by the Exchange Network within the state, tribe or territory.

EPA/ENLC Final Data Standards List:* (as of 01/01/2008**)**

Data standards are documented agreements on the representation, format, and definition of data that are shared by organizations. Implementing data standards improves the quality of EPA's data and enhances the Agency's ability to exchange data with partner States and Tribes. The following standards have been created as a result of collaborative efforts between EPA, States and Tribes.

- Attached Binary Object (Ver. 1)
- Bibliographic Reference (Ver. 1)
- Biological Taxonomy (Ver. 2)
- Chemical Identification (Ver. 2)
- Compositing Activity (Ver. 1)
- Contact Information (Ver. 2)
- Enforcement/Compliance (Ver. 1)
- Environmental Sampling, Analysis and Results Data Standard - Overview of Component Data Standards (Ver. 1)
- Environmental Sampling, Analysis and Results: Analysis and Result (Ver. 1)
- Environmental Sampling, Analysis and Results: Field Activity Data Standard (Ver. 1)
- Environmental Sampling, Analysis and Results: Monitoring Location(Ver. 1)
- Environmental Sampling, Analysis and Results: Project (Ver. 1)
- Equipment (Ver. 1)
- Facility Site Identification (Ver. 2)
- Institutional Control (Ver. 1)
- Latitude/Longitude (Ver. 2)
- Measure (Ver. 1)
- Method (Ver. 1)
- Permitting Information (Ver. 2)
- Quality Assurance and Quality Control (Ver. 1)
- Representation of Date and Time (Ver. 1)
- SIC/NAICS (Ver. 2)
- Sample Handling (Ver. 1)
- Tribal Identifier (Ver. 2.2)
- Well Information (Ver. 1)

Appendix D

Detailed Application Instructions

Applicants for the FY 2009 Exchange Network Grant program must submit an application package to EPA by November 21, 2008. Tools to help applicants prepare their applications are available at http://www.exchangenetwork.net.

This year, OEI continues its phased approach for grant application submission, evaluation, and award processes while offering two methods which applicants may use to apply for National Environmental Information Exchange Network grants in *one of two ways*: 1) hardcopy, mailed or delivered applications, or 2) electronic applications through the federal grants.gov web site. Please use only one method. Initially, a streamlined application will be accepted which provides needed information to allow for the evaluation of the project, including work areas to be accomplished, priority activities supported, funding needs, and results expected from the funded proposal.

Hardcopy application materials must be submitted with one original and two copies. A checklist of required application materials is available to assist applicants at: http://www.epa.gov/exchangenetwork/grants/index.html. Regardless of mode of submission, application packages must include the following information:

1. **Cover letter** including:
    a. Recipient information, type of vehicle requested (grant/cooperative agreement/ Performance Partnership Grant), and proposed amounts of direct funding or in-kind support
    b. Contact information for the Project Lead
    c. Number of copies of the application (one original plus two copies)
    d. One sentence description of the project's goal
    e. Data exchanges (and data standards) for which the applicant is requesting funding
    f. Any additional partners on the grant
    g. The amount of funds requested
    h. Coordination efforts between the IM/IT and Environmental/Health Programs
    i. Signature of executive level Authorized Organizational Representative (AOR)
2. **Project Narrative/Work Plan,** including a Quality Assurance Narrative Statement which addresses the Environmental Results (Section I-1) and Evaluation Criteria (Section V) of this announcement.
3. **Budget Narrative and Detailed Itemized Budget forms** which are available at http://www.epa.gov/ogd/forms/forms.htm.
4. Copy of **Negotiated Indirect Cost Rate Agreement**, if indirect costs are included in the budget or a copy of the submitted application to the cognizant Federal agency
5. **Resume(s)** of the Project Manager(s) or Project Lead(s)
6. **SF 424, Application for Federal Assistance**
7. **Additional information needed from inter-tribal consortium (if applicable, see below)**

Please note that after a potential grantee is notified of their selection for a recommendation for an award or partial award, additional documents will be needed to complete the funding package. Further instructions for submittal of these materials will be provided at that time.

Please note that the project narrative/work plan is limited to 10 single spaced pages, 10 pt. font size. **EPA will not review pages in excess of the page limitation**.

Final application packages will be requested from those eligible entities whose initial application packages have been successfully evaluated and preliminarily recommended for award. Those entities will be provided with instructions and a due date for submittal of the final application package. EPA expects to notify the applicants of its selection decisions after they are made in March 2009. At that point, successful applicants will be required to submit any remaining documents required to process awards (e.g., final SF424, SF424A). OEI anticipates that all grants will be awarded by August 2009. Regardless of mode of submission, the following documents are required to be submitted as part of the application package.

This Appendix provides detailed instructions on preparing the application package. Tools to help applicants prepare their applications are available on http://www.exchangenetwork.net.

Application Materials

1. **Cover letter** that outlines the following information (template at end of this appendix):
    a. Contact information for the Project Lead
    b. Number of copies of the application (one original plus two copies)
    c. One sentence description of the project's goal
    d. Data exchanges (and data standards) for which the applicant is requesting funding
    e. Any additional partners on the grant
    f. The amount of funds requested
    g. Coordination efforts between the IM/IT and Environmental/Health Programs
2. **Project Narrative – Work plan: Project Narratives/**Work plans must be limited to ten (10) pages, single-spaced, in a readable 10 pt. font size. **EPA will not review pages in excess of the page limitation of ten pages.**

    Applicants are required to submit work plans that address the Environmental Results information discussed in Section I-1 and all of the Evaluation Criteria listed in Section V that will be used to evaluate eligible application packages. As noted in Section I-1, it is EPA policy to link proposed assistance agreements to the Agency's Strategic Plan and Government Performance and Results Act architecture. This policy ensures that outputs and outcomes are appropriately addressed in assistance agreements, work plans and performance reports. This allows EPA to consider how the environmental results from assistance agreements contribute to the Agency's programmatic goals and objectives. The work plan should include a discussion on how coordination will occur between the IM/IT and the Environmental/Health programs. If the proposal is funded, the recipients would be required to submit a separate, tailored Quality Assurance Project Plan based on the guidance in Appendix E.

The project narrative work plan must also include the information outlined below:

A. General Project Information:

1. Fiscal funding year and name of grant program (i.e., FY 2009 Exchange Network Grant Program)
2. Name of the applicant organization (i.e., state, territory, tribe and agency or department)
3. DUNS number
4. Title of Project – a short descriptive title (i.e., no more than 70 characters)
5. Project Description – **a 3-5 sentence project description that highlights the major activities that are being proposed (i.e., infrastructure, data exchange/integration, and/or planning/mentoring/training activities)**
6. Project Manager – name and contact information (i.e., mailing address, phone number, fax number, and email address)
7. Head of Agency/Department – name, title, and contact information (i.e., for EPA's use in sending a notification letter, if the application is selected for funding)
8. Requested funding
   - total amount
   - portion of total requested as direct funding
   - portion of total requested as EPA-provided in-kind services, if any
9. Preferred assistance vehicle
   - grant or cooperative agreement (A cooperative agreement should be requested for projects that require substantial EPA involvement or the applicant is requesting EPA-provided in-kind services.)
   - amendment to an existing Performance Partnership Grant (PPG) or Consolidated Grant.

B. **Project Goals, Tasks, Target Dates, and Outputs/Outcomes**: Describe the major goals of the project covering *the two-year project period.* For each goal, outline the tasks that will be accomplished, along with the expected outputs and outcomes for each task. See Appendix E (Quality Assurance Guidelines) for some examples of possible project goals, tasks, target completion dates, and expected outputs/outcomes. Please note that the examples in Appendix E are not intended to limit the scope or types of projects that the applicant could propose. In addition, concisely describe the coordination and relationship between the IM/IT and Environmental/Health Programs on this project. Also, describe your plan for tracking and measuring progress towards achieving the expected project outputs and outcomes including those identified in Section I of this announcement.

C. Total Project Budget and Goal-Specific Costs: List the *total project budget* and the *total costs associated with each goal.* Clearly indicate whether particular project goals must be completed before other goals can be pursued (e.g., a goal to implement an operational Exchange Network Node would need to be achieved before implementing Node-to-Node data Exchanges). **This goal-specific budget information is important, since EPA may wish to consider partially funding some projects.** More detailed budget information must be included in the Detailed Itemized Budget. (See document 4 below.) Applicants are strongly encouraged to add funds for travel to national, regional and area Exchange Network conferences.

D. Formal Project Partners – Roles/Responsibilities and Distribution of Funds: If the proposed project involves formal project partners – partners who will actively participate in implementing the project – please outline the following:

1. the roles and responsibilities of each partner in carrying out each of the project goals (i.e., as outlined in section B of the work plan);
2. how the funding, if awarded, would be distributed by the recipient among other project partners, if at all; and
3. how the applicant would ensure ongoing coordination and collaboration among the partners during the two-year project period (e.g., regular teleconferences, meetings, and/or written status reports).

F. Programmatic Resources and Key Personnel: Briefly describe the programmatic resources and key personnel that will be involved in the project. Highlight any expertise or past experiences that may be particularly helpful in carrying out the project. If the project includes collaborative partners, the above information must be provided for both lead and partner resources and personnel. (Biographical sketches of the lead and partner Project Manager(s) should be included in the application package.)

G. Relevance to the Exchange Network: Describe how the project is relevant to the Exchange Network and how the project specifically supports Network priorities. This could include a description of how the project addresses one or more data exchange areas described in Appendix B of this document or the planning, mentoring, and/or training activities described in Appendix C. This section could also be used to discuss how the project will build on the previous work of other Exchange Network partners.

H. Environmental Past Performance: Applicants must submit a list of no more than five federally and/or non-federally funded assistance agreements (an assistance agreement is a grant or cooperative agreement and not a contract) of similar size, scope, and relevance to the proposed project performed in the last three years. If applicable, current and/or prior Exchange Network grants must be included in the list. Applicants must describe how they documented and/or reported on whether they were making progress towards achieving the expected results (e.g., outcomes and results) under those assistance agreements. If the applicant was not making progress, they need to indicate whether, and how, this was documented. In evaluating applicants under this factor, EPA will consider the information provided by the applicant, the semi-annual and final reports for Exchange Network grants, and may also consider relevant information from other sources including agency files (e.g., to verify and/or supplement the information supplied by the applicant). If you do not have any relevant or available environmental results past performance information, please indicate this in the project narrative and you will receive a neutral score for this factor under Section V. If you do not provide any response for this item, you may receive a score of 0 for this factor. In addition, an applicant's score under this factor may be reduced if any of the semi-annual or final reports are missing.

3. **Budget Narrative – Detailed Itemized Budget:** The *total project budget and the costs associated with each major goal* should be described in a detailed itemized budget. The budget must include the level of detail outlined below. **Please note that if the following budgetary information is not included, it may delay the review of your application.**

   A. Personnel – List all staff positions by title. Give the annual salary of each individual, the percentage of the individual's time that would be assigned to the project, and total personnel cost (for lead *and* partner personnel) for the budget period.

   B. Fringe Benefits – Identify the fringe benefit rate (i.e., percentage), the basis for its computation, and the types of benefits included.

   C. Travel – Specify the mileage, per diem, and estimated number of trips (i.e., specifying in-state and out-of-state trips) and other costs for each type of travel. Applicants are strongly encouraged to add funds for travel to national, regional and area Exchange Network conferences.

   D. Equipment – Identify each item of equipment to be purchased which has an estimated acquisition cost of $5,000 or more per unit and a useful lifetime of more than one year. Items with a unit cost of less than $5,000 are deemed to be supplies, pursuant to 40 CFR 31.3 and 30.2. Please list quantity and unit cost per item.

   E. Supplies – Supplies include all tangible personal property other than "equipment." The detailed budget should identify categories of supplies to be procured (e.g., laboratory supplies or office supplies). Please list quantity and unit cost per item.

   F. Contractual – Identify each proposed contract vehicle and specify its purpose and estimated cost. If using in-kind services, applicants must list the amount to be placed in in-kind services. In-kind services should also be mentioned in the cover letter, work plan and the budget.

   G. Other – List each item in sufficient detail for U.S. EPA to determine whether the costs are reasonable or allowable. Any other item not covered in this list of budgetary information, e.g., training, should be listed here.

   H. Indirect Charges – If indirect charges are included in the budget, outline the approved indirect cost rate (i.e., must be verified based on the Indirect Cost Rate Agreement), a description of the base used to calculate indirect costs and total cost of the base, and the total indirect charges requested (i.e., product of rate times the base). **Before an applicant can incur any costs under the indirect cost category, the Indirect Cost Rate Agreement must be approved and current.**

4. **Negotiated Indirect Cost Rate Agreement** (if indirect costs are included in the project budget): You must submit a **current** copy of your organization's Indirect Cost Rate Agreement as part of the application package if your proposed budget includes indirect costs.

If you do not have a current rate, you may submit a copy of the submitted application to the cognizant fiduciary agency.

5. **Biographical Sketches for the Project Manager(s)/Resumes:** Attach a copy of the biographical sketch of each project manager for the proposed project. If the project includes collaborative partners, biographical sketches should be included for both lead and partner project managers. Each biographical sketch should outline the education, work history, and knowledge/expertise of the individual that relate to managing the proposed project.

6. **SF 424, Application for Federal Assistance**

7. **Additional information for inter-tribal consortium:** An inter-tribal consortium that wishes to apply for the FY 2009 Exchange Network Grant Program must also include written documentation in the application package to demonstrate that:
   - a formal partnership exists among the Indian tribal governments that are members of the inter-tribal consortium, and the majority of the members are federally recognized Indian tribes; and,
   - the consortium's federally recognized tribal members have authorized the consortium to apply for and receive assistance (if awarded) from the Exchange Network Grant Program.

Submitting a Hard-Copy Application Package

If submitting a hard-copy application, please include: 1) the original application package, including all of the materials outlined above, plus two copies of the entire package; and 2) one self-addressed, stamped envelope to request acknowledgement of receipt of the grant application. If you do not submit a self-addressed, stamped envelope, you will not receive an acknowledgement of receipt. If you requested acknowledgement and have not received a confirmation of receipt from EPA regarding the submission of your hard copy grant application within 30 days of the application deadline, please contact Edward Mixon, Exchange Network Grants Manager, at (202)-566-2142. Failure to do so may result in your application not being considered.

Hard-copy applications must be postmarked (or equivalent from an overnight mail or courier service) at or before 11:59 PM (Eastern Standard Time) on November 21, 2008. *EPA recommends the use of overnight delivery or courier services to avoid any unnecessary delays.* Applicants should send their hard-copy applications to one of the following addresses:

U.S. Postal Service Deliveries:
Edward Mixon
U.S. Environmental Protection Agency
Office of Environmental Information
Office of Information Collection
1200 Pennsylvania Ave., NW, Mail Code 2823-T
Washington, DC 20460

Overnight Delivery or Courier Services
Edward Mixon
U.S. Environmental Protection Agency
Office of Environmental Information
Office of Information Collection
1301 Constitution Avenue, NW
EPA West Building, 6th Floor, Room 6416-V
Washington, DC 20004
Phone: (202)-566-2142

If submitting a hard-copy application, you are also encouraged, but not required, to submit an electronic copy of the project narrative work plan, via email, to Edward Mixon at mixon.edward@epa.gov.

Submitting an Electronic Application Package

If submitting an application package electronically, rather than in hard copy, please submit the application through the grants.gov Web site, http://www.grants.gov. The Funding Opportunity Number for this announcement is **EPA-OEI-09-01**. Electronic applications must be submitted to this Web site at or before 11:59 PM**, Eastern Standard Time on November 21, 2008**. EPA advises applicants to submit their electronic applications early, so that if any technical difficulties arise, there will still be time to address them before the application deadline.

If you wish to apply electronically via grants.gov, the electronic submission of your proposal must be made by an official representative of your institution who is registered with grants.gov and authorized to sign applications for Federal assistance For more information, go to http://www.grants.gov and click on "Get Registered" on the left side of the page. *Note that the registration process may take a week or longer*. If your organization is not currently registered with grants.gov, please encourage your office to designate an authorized organizational official (AOR and ask that individual to begin the registration process as soon as possible.

To begin the application process under this grant announcement, go to http://www.grants.gov and click on the "Apply for Grants" tab on the left side of the page. Then click on "Apply Step 1: Download a Grant Application Package" to download the compatible Adobe viewer and obtain the application package. **To apply through grants.gov you must use Adobe Reader applications and download the compatible Adobe Reader version (Adobe Reader applications are available to download for free on the grants.gov website. For more information on Adobe Reader, please visit the Help section on grants.gov at** http://www.grants.gov/help/help.jsp or http://www.grants.gov/aboutgrants/program_status.jsp).

Once you have downloaded the viewer, you may retrieve the application package by entering the Funding Opportunity Number, EPA-OEI-09-01, or the appropriate CFDA number (CFDA 66.608), in the space provided. Then complete and submit the application package as indicated. You may also be able to access the application package by clicking on the button "How To Apply" at the top right of the synopsis page for this announcement on http://www.grants.gov (to find the synopsis page, go to http://www.grants.gov and click on the "Find Grant Opportunities" button on the left side of the page and then go to "Search Opportunities/Browse by Agency" and then go to "EPA Opportunities"). If you have any technical difficulties while applying electronically, please refer to http://www.grants.gov/help/help.jsp.

Application materials submitted through grants.gov will be time/date stamped electronically. If you have not received a confirmation of receipt from EPA (not from grants.gov) within 30 days of the application deadline, please contact Edward Mixon, Exchange Network Grant Program Manager, at (202)-566-2142. Failure to do so may result in your application not being reviewed.

Grants.gov Application Preparation and Submission Instructions

Applicants applying electronically must submit all materials listed above using the following application submission instructions:

Documents 1-3 listed above should appear in the "Mandatory Documents" box on the Grants.gov Grant Application Package page.

For Documents 1 and 2 you will need to attach electronic files. Prepare your cover letter and project narrative/workplan as described in Appendix D and save the documents to your computer as an MS Word file. (U.S. EPA prefers to receive documents in MS Word 97, 2003.) When you are ready to attach the project narrative/workplan to the application package, click on "Project Narrative Attachment Form," and open the form. Click "Add Mandatory Project Narrative File," and then attach your Work Plan (previously saved to your computer) using the browse window that appears. You may then click "View Mandatory Project Narrative File" to view it. Enter a brief descriptive title of your project in the space beside "Mandatory Project Narrative File Filename;" the filename should be no more than 40 characters long. When you have finished attaching the necessary documents, click "Close Form." When you return to the "Grant Application Package" page, select the "Project Narrative Attachment Form" and click "Move Form to Submission List." The form should now appear in the box that says, "Mandatory Completed Documents for Submission." If there other attachments that you would like to submit to accompany your project narrative/work plan, you may click "Add Optional Project Narrative File" and proceed as before.

For Document 3, the Detailed Itemized Budget – use the "Budget Narrative Attachment Form," click on the appropriate form and then click "Open Form" below the box. The fields that must be completed will be highlighted in yellow. Optional fields and completed fields will be displayed in white. If you enter an invalid response or incomplete information in a field, you will receive an error message. When you have finished filling out the form, click "Save." When you return to the electronic "Grant Application Package" page, click on the form you just completed, and then click on the box that says, "Move Form to Submission List." This action will move the document over to the box that says, "Mandatory Completed Documents for Submission."

Documents 4 and 5 are listed in the "Mandatory Documents" box, but *please note you only need to submit Document 4 if it is applicable to your application.* You are required to submit Document 4 – Negotiated Indirect Cost Rate Agreement – if you have included any indirect costs in your proposed budget. **If you do not have a current agreement, please attach a copy of a**

submitted application to your cognizant fiduciary agency. All applications must include Document 5. To attach the documents, use the "Other Attachments Form" in the "Mandatory Documents" box. After attaching the document, please remember to highlight the "Other Attachments Form" and click "Move Form to Submission List" in order to move the documents to the box that says, "Mandatory Completed Documents for Submission."

Document 6 is listed in the "Mandatory Documents" box, . To submit this form, click on the appropriate form and then click "Open Form" below the box. The fields that must be completed will be highlighted in yellow. Optional fields and completed fields will be displayed in white. If you enter an invalid response or incomplete information in a field, you will receive an error message. When you have finished filling out each form, click "Save." When you return to the electronic Grant Application Package page, click on the form you just completed, and then click on the box that says, "Move Form to Submission List." This action will move the document over to the box that says, "Mandatory Completed Documents for Submission."

Document 7 is listed in the "Mandatory Documents" box, but please note it is only applicable to inter-tribal consortiums. To attach Document 7, use the "Other Attachments Form" in the "Mandatory Documents" box. After attaching the document, please remember to highlight the "Other Attachments Form" and click "Move Form to Submission List" in order to move the documents to the box that says, "Mandatory Completed Documents for Submission."

Once you have finished filling out all of the forms/attachments and they appear in one of the "Completed Documents for Submission" boxes, click the "Save" button that appears at the top of the Web page. *It is suggested that you save the document a second time, using a different name, since this will make it easier to submit an amended package later, if necessary.* Please use the following format when saving your file: "Applicant Name – FY 2009 Exchange Network – 1st Submission" or "Applicant Name – FY 2009 Exchange Network – Back-up Submission." If it becomes necessary to submit an amended package at a later date, then the name of the 2nd submission should be changed to "Applicant Name – FY 2009 Exchange Network – 2nd Submission."

Once your application package has been completed and saved, send it to your AOR for submission to U.S. EPA through grants.gov. Please advise your AOR to close all other software programs before attempting to submit the application package through grants.gov.

In the "Application Filing Name" box, your AOR should enter your organization's name (i.e., abbreviate where possible) and the words, "FY 2009 Exchange Network." The filing name should not exceed 40 characters. From the "Grant Application Package" page, your AOR may submit the application package by clicking the "Submit" button that appears at the top of the page. The AOR will then be asked to verify the agency and funding opportunity number for which the application package is being submitted. If problems are encountered during the submission process, the AOR should reboot his/her computer before trying to submit the application package again. [It may be necessary to turn off the computer (not just restart it) before attempting to submit the package again. It may also be necessary to change to another computer.]

If the AOR continues to experience submission problems, he/she may contact grants.gov for assistance by phone at 1-800-518-4726 or email at http://www.grants.gov/help/help.jsp or call Edward Mixon at 202-566-2142.

You are encouraged to submit your application early, in case problems are encountered that result in delays. Grants.gov provides acknowledgements of application receipt that include an on-screen notification of successful initial transfer as well as an e-mail notification of successful transfer from Grants.gov to EPA. While it is advisable to retain copies of these Grants.gov acknowledgements to document submission, *the only official documentation that the application has been received by EPA/OEI is the e-mail acknowledgement sent by Edward Mixon to the applicant.* ***If an email acknowledgment from EPA/OEI (not support@grants.gov) has not been received within 15 days of the solicitation closing date, immediately inform Edward Mixon (see Section VII of this announcement). Failure to do so may result in your application not being reviewed.***

Suggested template for cover letter

[Organizational Letterhead]

Mr. Edward Mixon
U.S. Environmental Protection Agency
Office of Environmental Information
1200 Pennsylvania Ave., NW, Mail Code 2823-T
Washington, DC 20460

Dear Mr. Mixon:

I am pleased to submit the [state, tribe or territory name here] [Name of Department or Agency]'s application for a [**stipulate type of assistance**: grant/cooperative agreement/Performance Partnership Grant or Consolidated Grant amendment] under the FY 2009 Exchange Network Grants Program. The contact for this grant application is:

Name/Title of Project Lead
Name of Office or Division
Name of Department or Agency
Full Mailing Address
Phone Number(s)
Email address

[This package contains one original with signatures and two copies of the full application package.] **OR** [This application was sent via grants.gov.] [Name of State, Tribe or Territory] [Name of Department or Agency] [Name of Office or Division] in EPA Region [number or name] is applying for [Dollar Amount of Funds] in direct grants funding and [Dollar Amount of Funds] in in-kind support. The project goal is: [One sentence statement of project goal here]. We plan to develop [number of data exchanges] data exchanges: [list data exchanges (with acronyms)] and**/or** the following data standards [list data standards].

Short narrative description: [two to three sentences describing your project].

We have ['no' or number of partners] additional partners in this grant proposal. [Our partners are: name partners].

This grant funding will provide Information Technology/Information Management support to the [state/territory/tribal] [environmental and/or health] department(s) to achieve the following environmental results:

- [list environmental outcomes
- Attach a letter from the director of IT/IM in the organization stating types and results of collaboration
- Describe collaboration efforts and outcomes]

If there are any questions, please feel free to call either myself or the contact named in this letter.

Sincerely,

[Name/Title of Authorized Organizational Representative]

Attachment

Appendix E

Quality Assurance Guidelines

This appendix is designed to help states, territories, and tribes plan and implement high-quality Exchange Network projects. The success of Exchange Network projects depends on the achievement of definitive outputs and outcomes and on the quality of the products, services, and capabilities that are delivered. For example, the utility and interoperability of the Exchange Network depends on the use of compatible computer hardware/software and technical processes and on the use of agreed-upon data standards and XML schema.

The table below outlines some of the goals, tasks, outputs, outcomes, and relevant quality assurance guidance documents that may be useful to applicants when developing their proposed project work plans. *The goals and tasks included in this table are only examples of the types of activities applicants may wish to propose, and they are not intended to limit the types of projects or activities that applicants may propose.*

Applicants for the FY 2008 Exchange Network Grant Program are not required to submit a Quality Assurance Project Plan (QAPP) as part of the application package. **Each applicant who receives an award will be required to submit a QAPP that is tailored to the activities in his/her particular proposal within a specified period of time after the award is issued, as a programmatic condition of the Assistance Agreement.** See the attached table as a framework to ensure that all activities are covered.

FY 2009 NATIONAL ENVIRONMENTAL INFORMATION EXCHANGE NETWORK GRANT PROGRAM QUALITY ASSURANCE GUIDELINES

GOAL	TASK	OUTPUT	OUTCOME	QUALITY ASSURANCE GUIDANCE DOCUMENTS
Activity Group: Infrastructure Development				
Develop and implement an Exchange Network Node	Review demonstrated Node configurations	Appropriate Node configuration identified	The state/territory/tribe understands the requirements for developing an Exchange Network Node in the information technology environment of that state/territory/tribe	Refer to the "Node Developer Tool Box" at http://www.exchangenetwork.net/Node/dev_toolbox/index.htm See the Demonstrated Node Configuration (DNC) documents available at http://www.exchangenetwork.net/Node/dnc/index.htm
	Develop an Exchange Network Node	Node developed, but not yet tested	The state/territory/tribe understands the Exchange Network Node specifications and requirements that will enable automated data exchanges	See the "30 Minute Guide to Developing and Implementing an Exchange Network Node," at http://www.exchangenetwork.net/Node/dev_toolbox/Node_guide_v1.1.doc See the "Network Node Functional Specification, Version 1.1" at http://www.exchangenetwork.net/Node/dev_toolbox/Node_functional_spec_v1.1.pdf See the "Network Exchange Protocol, Version 1.1" at http://www.exchangenetwork.net/Node/dev_toolbox/network_exchange_protocol_v1.1.pdf See the "Network Security Guidelines and Recommendations," at http://www.exchangenetwork.net/Node/dev_toolbox/security_guidelines_041603.pdf

GOAL	TASK	OUTPUT	OUTCOME	QUALITY ASSURANCE GUIDANCE DOCUMENTS
	Test the Node to verify compliance with Exchange Network Node functional specifications and address any shortcomings	Node tested and compliant with functional specification verified	Better understanding of how to meet the Network Node specifications within a particular information technology environment	See the Node "Integration Test Tool" at https://test.epacdxNode.net/test/
	Implement an operational Node	Operational status of Node verified by EPA's Central Data Exchange or other means Demonstrated ability to exchange data automatically through the Node with other Exchange Network partners	Increased speed and timeliness of data exchanges Increased efficiency of data exchanges by reducing administrative burdens and need for manual interventions Lower costs and expanded functionality of infrastructure due to the sharing of information technology components and tools among partners	See "Exchange Network Node Implementation Guide, Version 1.0" at http://www.exchangenetwork.net/Node/dev_toolbox/implementation_guide_v1.0_032504.pdf

GOAL	TASK	OUTPUT	OUTCOME	QUALITY ASSURANCE GUIDANCE DOCUMENTS
Enhance other infrastructure capabilities to improve Exchange Network capabilities	Assess current infrastructure capabilities: security controls, Web procedures, and data management processes that would identify any areas where enhancements are needed	Assessment of security controls in comparison to recommended controls	Better understanding of security threats and vulnerabilities and the types of controls needed to minimize risks	See the "Network Security Guidelines and Recommendations," at http://www.exchangenetwork.net/Node/dev_toolbox/security_guidelines_041603.pdf
	Implement the security controls, Web procedures, and data management processes that are needed to participate in the Exchange Network	Security controls that comply with the Network security guidelines and recommendations	Implementation of the security controls needed to ensure that the availability, integrity, and if necessary, the confidentiality of the data will not be compromised	
Activity Group: Data Exchange and Integration				
Develop and implement an Exchange Network data exchange	Identify data exchanges that are of most interest to Exchange Network partners	Verification that the data exchange is of interest to other Exchange Network partners	Clearer understanding of the data that are needed or of value to other states/territories/tribes and that could be exchanged using the Exchange Network	Refer to Appendix B of the FY 2008 Solicitation Notice for EPA Program Office suggestions See the "Core Reference Model," an inventory that organizes and identifies commonalities among current/potential state and EPA data exchanges, http://www.exchangenetwork.net/dev_schema/crm_v1_033103.pdf

GOAL	TASK	OUTPUT	OUTCOME	QUALITY ASSURANCE GUIDANCE DOCUMENTS
	Work with other partners to specify the data exchange requirements	Data exchange requirements specified	Identification of the initial areas to be addressed by partners when developing Trading Partner Agreements	Refer to Appendix B of the FY2008 Solicitation Notice for EPA Program Office suggestions
	Determine whether approved data standards exist that may apply to the data exchange	Relevant data standards identified	The use of data standards in data exchanges will facilitate the preparation of XML schema or the mapping of data to registered XML schema	See Environmental Data Standards Council (EDSC)-approved data standards, http://www.envdatastandards.net
	Incorporate approved data standards into the data that are collected, stored, and exchanged	Incorporation of approved data standards into Exchange Network data exchanges	Enhanced partner capabilities for analyzing, comparing, and integrating data due to the use of common data standards and formats	See Environmental Data Standards Council (EDSC)-approved data standards, http://www.envdatastandards.net
	Obtain approved XML schema, if available	XML schema obtained	Enhanced ability of a partner to participate in a particular Exchange Network data exchange	See the Exchange Network XML Registry for a list of approved XML schema and schema components at http://oaspub.epa.gov/emg/xmlsearch$.startup See the "Shared Schema Components Usage Guide and Technical Reference" at http://www.exchangenetwork.net/dev_schema/SharedSchemaComponents-UsageGuide_v2.0.pdf

GOAL	TASK	OUTPUT	OUTCOME	QUALITY ASSURANCE GUIDANCE DOCUMENTS
	If an XML schema for the data exchange of interest is not available, establish or participate in a EPA Integrated Project Team (IPT) to develop a schema	Participation in an IPT	Enhanced collaboration among Exchange Network partners to implement data exchanges of interest	
	Develop an XML schema	New or revised XML schema developed, but not yet tested	Contribution to XML schema modules listed in the Exchange Network XML Registry and to the Core Reference Model	See the "XML Schema Development" at http://www.exchangenetwork.net/dev_schema/index.htm and the "XML Design Rules and Conventions" at http://www.exchangenetwork.net/dev_schema/EN_XML_Schema_Design_Rules_v1.1.pdf
	Test the XML schema for compliance with the Exchange Network Design Rules and Conventions and justify, document, and address any deviations	Documentation of XML schema testing and follow-up schema revisions, if necessary	Contribution to the XML Registry and Core Reference Model for possible reuse by other partners	See the "XML Schema Review Process" at http://www.exchangenetwork.net/dev_schema/CRMv2_0.doc?bcsi_scan_79C1E2FF29C0C6D8=1 See the Schema Design Tool for the Facility Registry System (FRS) at http://www.epa.gov/enviro/html/frs_demo/design_tool.html
	Post new or revised XML schemas on the Exchange Network XML Registry	New or revised XML schema posted	Use of common XML schema allows multiple partners to share data across the Exchange Network	See the Exchange Network XML Registry for a list of approved XML schema and schema components at http://oaspub.epa.gov/emg/xmlsearch$.startup

GOAL	TASK	OUTPUT	OUTCOME	QUALITY ASSURANCE GUIDANCE DOCUMENTS
	Map data in partner databases to the approved XML schema	Data mapped to XML schema	Increased availability of data from a particular partner to other Exchange Network partners	
	Develop schema validation and data error-checking tools	Availability of schema validation and error-checking tools to improve the quality of data exchanged over the Exchange Network	Availability of higher-quality data for decision-making and programmatic operations	
	Establish Trading Partner Agreements (TPA's) or similar agreements that describe the parameters for exchanging the data with other Exchange Network partners	TPA's established with other Exchange Network partners	Agreed-upon exchanges of data through the Exchange Network to address partners' business needs	"Trading Partner Agreements: Analysis and Best Practices" at http://www.exchangenetwork.net/exchanges/TPA_Final_Report_Best_Practices.pdf
	Implement an operational Exchange Network data exchange	Exchange Network data exchange becomes operational	Electronic availability of standardized, timely, high-quality data over the Exchange Network	

GOAL	TASK	OUTPUT	OUTCOME	QUALITY ASSURANCE GUIDANCE DOCUMENTS
Analyze or integrate data that are shared through the Exchange Network to address an environmental or related issue	Identify data analysis needs	Description of data analysis needs	Better understanding of data analysis needs and capabilities	See 2003 Draft Report on the Environment," http://www.epa.gov/indicators/roe/html/roeTOC.htm
	Identify relevant data that are available through the Exchange Network	List of relevant data that are available from Exchange Network partners	Better understanding of how the Exchange Network can be used to address data and information needs	See State Information Technology Profiles available from the Environmental Council of the States (ECOS) at http://www.ecos.org/section/committees/information_management
	Establish Trading Partner Agreements (TPA's) or similar agreements with other Exchange Network partners to share relevant data	TPA's established with other Exchange Network partners	Agreed-upon exchanges of data using the Exchange Network to address partners' business needs	"Trading Partner Agreements: Analysis and Best Practices" at http://www.exchangenetwork.net/exchanges/TPA_Final_Report_Best_Practices.pdf
	Develop data analysis tools and protocols	Availability of data analysis tools and protocols to other Exchange Network partners	Greater capability to analyze data available through the Exchange Network	
	Develop or utilize Web Services to address identified business needs	Increased availability and use of Web Services available through the Exchange Network	Increased use, analysis, and integration of data across institutional boundaries	

GOAL	TASK	OUTPUT	OUTCOME	QUALITY ASSURANCE GUIDANCE DOCUMENTS
	Conduct data analyses using data available through the Exchange Network	Data analysis results that can be shared with other Exchange Network partners	Enhanced understanding of an environmental or related issue	
Use the Exchange Network to exchange geospatial data to enhance environmental decision-making and programmatic operations. Such a project might require the development of the dataset before exchange.	Prepare standard geospatial metadata for geospatial datasets	Relevant geospatial metadata is developed and published	Preparation of standard metadata ensures geospatial data can be easily searched and discovered by Network partners	See Federal Geographic Data Commission Web site for federal geospatial data standards, http://www.fgdc.gov/metadata See Geospatial One Stop Web site for publishing geospatial datasets, http://gos2.geodata.gov/wps/portal/gos
	Determine if geospatial dataset already exists	Relevant geospatial datasets identified	The re-use of existing datasets prevents duplicative efforts, reduces costs and ensures consistency across network Nodes	See Geospatial One Stop Web site for existing geospatial datasets, http://gos2.geodata.gov/wps/portal/gos

Activity Group: Planning, Mentoring, and Training				
Address key training and mentoring needs of Exchange Network partners	Identify the training and mentoring needs of current and potential Exchange Network partners and conduct pre-training and mentoring assessments	Identification of organizations that need training and mentoring and assessment of pre-training and mentoring levels of knowledge	Better understanding of Exchange Network partners training and mentoring needs	
	Develop training and mentoring materials and courses	Availability of training and mentoring materials and courses that can be used by other partners	Increase or enhance participation in the Exchange Network by states/territories/tribes	
	Distribute training and mentoring materials and conduct training and mentoring courses	Number of training and mentoring sessions conducted	Increased knowledge about the Exchange Network and how it can be used to enhance decision making and programmatic operations	
	Conduct post-training and	Assessment of post-training and	Continuing improvements in the	

	mentoring assessments and address any shortcomings in the training and mentoring materials/courses	mentoring level of knowledge and revised training and mentoring materials/ courses	training and mentoring available to Exchange Network partners	
Engage in collaborative planning activities to address data and information needs using the Exchange Network	Identify data and information needs that could be addressed using the Exchange Network	Identify major data and information needs	Better understanding of shared data and information needs among Exchange Network partners	Refer to Appendix B of the FY 2008 Solicitation Notice for EPA Program Office descriptions of key data exchanges See the "Core Reference Model," an inventory that organizes and identifies commonalities among current/potential partner and EPA data exchanges, http://www.exchangenetwork.net/dev_schema/crm_v1_033103.pdf See 2003 Draft Report on the Environment," http://www.epa.gov/indicators/roe/html/roeTOC.htm
	Outline the planning project activities and expected outputs/ outcomes	Written documentation of project goals, activities, and expected outputs/outcomes	Clearer understanding of the steps that need to be taken to address the identified data/information need	
	Identify and establish collaboration among	Written documentation of partner roles,	Increase collaboration among partners to address major data and	

	relevant partners	responsibilities, and expectations	information needs	
	Describe what resources are needed to carry out the project and how they will be distributed among the project partners	Written documentation of how available funds will be distributed across the project among the partners	Increased knowledge about the needs, capabilities, and expertise of other Exchange Network partners	
	Implement the planning project, record the results, and outline the next steps	Description of the results of the planning process that can be used as a foundation for the development and implementation of new Exchange Network capabilities	Multi-partner foundation for collaboratively developing and implementing new or enhanced Exchange Network capabilities	

Activity Group: Collaboration				
Engage in multi-partner collaboration to undertake the activities under the Data Exchange and Integration and the Mentoring, Planning and Training groups	Tasks may include any of those listed above.	See the outputs listed above.	See the outcomes listed above.	Refer to the guidance documents listed above. Also see Section III-1 for Eligibility criteria.

Appendix F

Semi -Annual Performance Progress Reports

Reporting is an important obligation that award recipients agree to undertake when they sign an Assistance Agreement. Both EPA and the recipients are accountable to Congress and to the public for the proper and effective use of Exchange Network assistance funds. The award recipient must submit electronically (i.e., via email) required ***Semi-Annual Progress Reports*** to the EPA Regional Project Officer, with a copy to the Exchange Network Grant Program Manager at EPA Headquarters. EPA expects all award recipients to submit complete and timely reports and will consider compliance with reporting requirements when evaluating future applications for financial assistance. The EPA Project Officer will be assigned when the award is issued.

These progress reports must be submitted within one month of the end of the reporting period. The reporting periods are from October through March (report due April 30) and from April through September (report due October 31). The first reporting period for the FY 2009 Exchange Network assistance agreements will be from the start of the project period through March 31, 2010, and the first semi-annual report will be due to EPA on April 30, 2010. Please use the form provided here.

In addition to the semiannual reports, the recipient agrees to submit to the EPA Project Officer within 90 days after the expiration or termination of the approved project period a final report using the *Semi-Annual Performance Progress Reports* form. The form can be found at: http://www.epa.gov/exchangenetwork/publications/index.html.

U.S. ENVIRONMENTAL PROTECTION AGENCY **Exchange Network Grant Program Progress Reporting Form** **for Use by Recipients of Assistance Agreements**			
Please Check: ☐ Semi-annual report ☐ Final Report	***Instructions: This form is for Exchange Network Grant recipients to report their progress. Recipients should send these to their regional grant project officer for spring reports by April 30 for the period October 1-March 31. Fall reports are due to the regional project officer by October 31 for the period April 1-September 30.***		
Recipient Information: **Agency Name:**		**EPA Grant Number – Program Code, Number, and Amendment Number (e.g., OS – 12345678 – 0):**	
		For grants awarded before 2006 Exchange Network Grant Category (i.e., One Stop, Readiness, Implementation, or Challenge):	
Project Manager: **Name:** **Phone:** **Email:**		**Funding Year:** **Award Amount:** **Expenditures during this reporting period:** **Funds Remaining:**	
		Reporting Period (starting and ending dates, mm/dd/yyyy):	**Date Report Submitted (mm/dd/yyyy):**
		EPA Project Officer to Whom Report is Submitted: **Name:** **EPA Region/Program:**	
Focus:			

Progress Report Instructions:

1. List major goals and each goal's outputs as described in the work plan.
2. In the "Scheduled Date" column enter the dates from the grant work plan
3. In the "Completion Date" column enter the date each output completed as of the period covered by this report
4. In the Outcomes column, briefly outline how the goal or output will enhance the recipient's ability to carry out its mission or result in other benefits.
5. Use **bold type** for the outputs or outcomes you achieved during the current reporting period.
6. Insert more rows if you need them by using the tab key in the last cell of the last row.

EXAMPLE

Goals	***Outputs***	***Scheduled Date***	***Completion date***	***List Outcomes for Each Goal, and, if they differ, each Output***
1. Begin flowing ambient air quality data through the Exchange Network.	*1. Develop XML schema by.*	*mm/yyyy*	*mm/yyyy*	*Enhanced environmental decision-making due to more timely access to ambient air quality data.*
	2. Initiate first test data flow by mm/yyyy	*mm/yyyy*		

Comments Instructions: If you have had any problems during the current period please report them here. In accordance with 40 C.F.R. §30.51(f) and 40 C.F.R. §31.40(d), a recipient of an EPA assistance agreement must notify EPA of any problems, delays, or adverse conditions that will materially impair the recipient's ability to achieve the outputs/outcomes specified in the assistance agreement work plan.

Current problems during this reporting period:

Describe any actions your organization has taken or plans to take to resolve the problem:

If you need help from EPA you may request it here:

Other comments:

Definitions

- **Project/Program Goal:** A major objective or endpoint identified in the assistance agreement work plan. A work plan may include one or more project/program goals. Use the goals as described in the assistance agreement work plan.
- **Output:** A product, service, or implementation target that will be produced or achieved during the project/program. Outputs may be *qualitative or quantitative*, but *they must be measurable during the assistance agreement funding period*.
- **Outcome:** Changes or benefits resulting from the successful achievement of the project/program activities and outputs. Outcomes may be environmental, behavioral, health-related, or programmatic in nature, but they must be *quantitative*. *Outcomes may not necessarily be achievable within the assistance agreement funding period*, and they can be described as short-term, intermediate, or long-term:
  1) *short-term* – changes in learning, knowledge, attitudes, or skills;
  2) *intermediate* – changes in behavior, practices, or decisions; or
  3) *long-term* – changes in environmental, human health, or other conditions.

Paperwork Reduction Act (PRA) Burden Statement: The public reporting and recordkeeping burden for this collection of information is estimated to average one hour per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.